TekTone®
SOUND & SIGNAL

**Communications
for today… and tomorrow**

Tek-CARE®500

**Wireless Emergency Call System
with EchoStream® Technology**

Installation and Operations Manual

TekTone® ha s designed Tek-CARE®500 to work as a system. It s master st ation computer has been carefully designed and matched to work with Tek-CARE®500 wireless and wired peripherals. TekTone® will not warrant o r suppor t component s of Tek-CARE®500 that are purchased sep arately unless the components are add-ons to previously sold systems. TekTone® will also not warrant or support a system that is a mix of TekTone® and Non-TekTone® parts, unless prior permission has been obtained.

A site survey must be perfor med and submitted befor e ordering a Tek-CARE®500 system. In order to track our systems and to inform facilities of software upgrades, full site information (site name, address and phone numb er) will be re quired when or dering. Site informa tion and master station computer warranty numbers will also be required when requesting technical support.

Installation and Operations Manual

Tek-CARE®500 devices comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) Devices may not cause harmful interference, and (2) devices must accept any interference received, including interference that may cause undesired operation.

Table of Contents

Tek-CARE500 Wireless Emergency Call System

List of Tables

Tek-CARE500 Wireless Emergency Call System

List of Figures

Tek-CARE500 Wireless Emergency Call System

1   Introduction

The Tek-CARE500 Wireless Emergency Call System with EchoStream Technology is the newest Tek-CARE500 system; it handles both Frequency Agile (FA) and EchoStream (ES) devices.This installation and operations manual provides information about the installation and use of the Tek-CARE500 Wireless Emergency Call System with EchoStream Technology. It also contains information about adding ES technology to an existing FA system. For information about installing a Tek-CARE500 Wireless Emergency call system with FA technology only, refer to the IL880 installation manual.

The information in this manual is organized as follows:

- *Introduction*, beginning on page 1, provides:
  - document information
  - installation prerequisites
  - information about determining the locations in which repeater/ locators will be placed
  - site preparation and wiring requirements.
- *System Components*, beginning on page 15, lists and describes the available TekTone system components.
- *Overview of the Installation Process and Tools*, beginning on page 31, provides a quick cross reference between the steps to follow to fully install and program the Tek-CARE500.
- *System Setup, Hardware*, beginning on page 47, provides step by step hardware installation instructions. This chapter also includes: *Add ES Technology to an Existing NC501 or NC501A*, beginning on page 52, which provides the information needed to complete an upgrade from any of the older Tek-CARE500 systems to the newer ES technology.
- *System Setup, Programming Using the LS500 Config Tool*, beginning on page 61, describes how to use the LS500 Config Tool to:
  - Program the Tek-CARE500
  - Set up data fields
  - Add data

- ***System Setup, Programming Using the LS501 Event Monitor***, beginning on page 91, describes how to use the LS501 Event Monitor to:
  - Add Transmitters
  - Add Residents and Assign Them to Locations
  - Assign Pendant Transmitters to Residents
  - Assign Check-In Times to Check-In Transmitters
  - Assign Transmitters to Zones
  - Add Staff
  - Create Staff Groups
  - Create Assignments
  - Save the Configuration
  - Print the Central Monitoring Device List
- ***Complete the Installation*** provides information about final hardware installation in these sections:
  - ***Remote Device Installation***, beginning on page 109
  - ***Test the Installation***, beginning on page 110
  - ***Add an LS586 Remote Event Monitor***, beginning on page 114
- ***Using the Tek-CARE500*** describes the everyday use of the Tek-CARE500, in these sections:
  - ***Saving and Retrieving the Configuration***, beginning on page 118
  - ***The LS501 Event Monitor***, beginning on page 119
  - ***Using the LS501 Event Monitor***, beginning on page 120
  - ***Tek-CARE500 Reporting System***, beginning on page 142
  - ***Using an LS586 Remote Event Monitor***, beginning on page 147

Terms Used in This Manual

To avoid confusion, the following standard terminology is used to describe Tek-CARE500 software and its on-screen representation. Detailed information on the software and using its components is provided later in this manual.

The Tek-CARE500 network consists of several background applications, the LS501 Event Monitor, and the LS500 Config Tool, all of which run on the NC501ES Master Station Computer.

The software applications are accessed through a visual interface called a Graphical User Interface (GUI). A GUI element, commonly called a *window*, consists of many components and elements. The most common components and elements of the Tek-CARE500 windows include:

- Title Bar
- Menu Bar
- Button Bar and Buttons
- Tabs
- Panels
- Combo Boxes
- List Boxes
- Check Boxes and Radio Buttons
- Scroll Bars (Vertical and horizontal)

In addition to the main window, the software produces pop-up windows on which a choice must be made. These components are referred to as dialog boxes. They can provide access to other software on the computer or to functions within the TekTone programs. Dialog boxes generally require a response to a question, or instructions for subsequent actions.
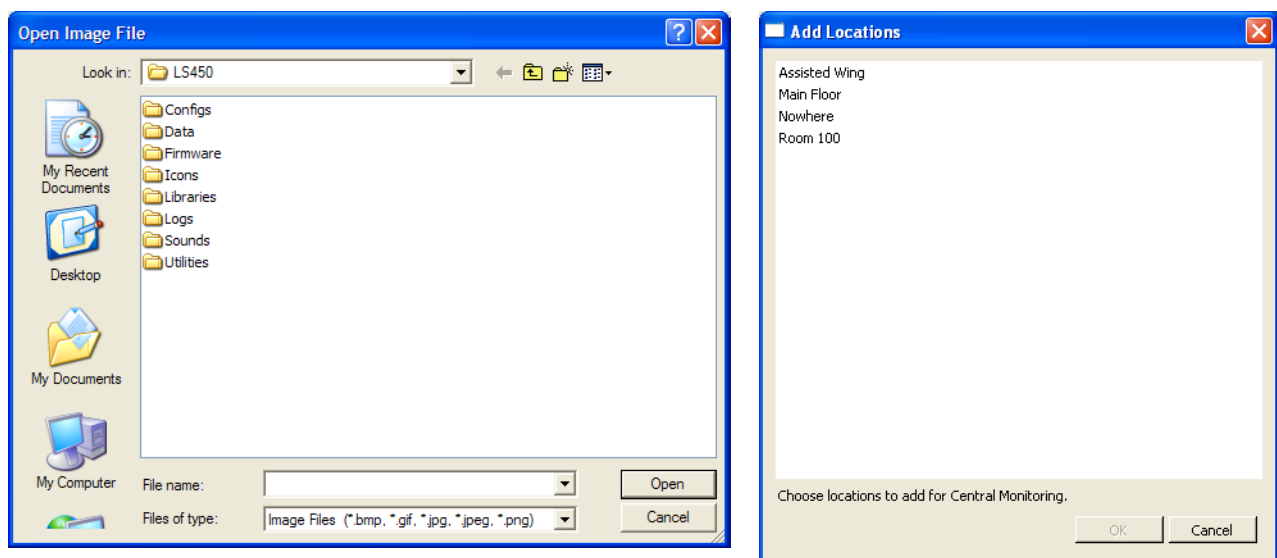
FIGURE 1. Dialog Box Examples

Title and Menu Bars
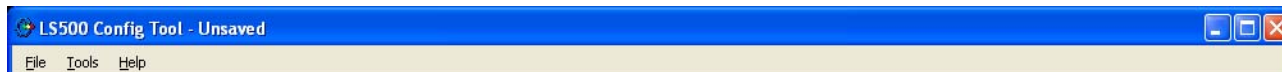
FIGURE 2. LS500 Config Tool Title and Menu Bars

Title and Menu Bars are used to identify the software and provide access to drop-down menus from which options can be selected.
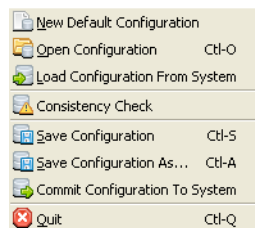
FIGURE 3. The LS500 Config Tool File Menu

Button Bar and Buttons

A Button Bar is a panel on the window that contains buttons that can be "clicked" or "pressed." Using the buttons generally causes a change on the window (for example, by opening a new panel) or in the software (for example, by saving changes).
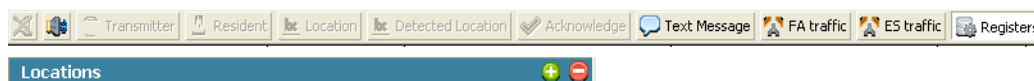
FIGURE 4. Button Bar Examples

Tab Bar and Tabs

A Tab Bar is a panel on the window that contains selectable tabs. Selecting a Tab will cause the window to display a group of related panels.
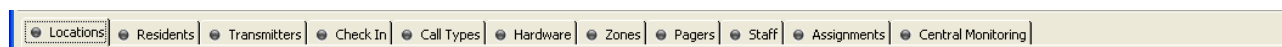
FIGURE 5. LS500 Config Tool Tabs

Panels

A Panel is the window component in which elements are placed. Elements on a panel are generally related, and are often labeled. The example in the following figure shows two labeled panels that include check boxes, a scroll bar, and active and inactive buttons.
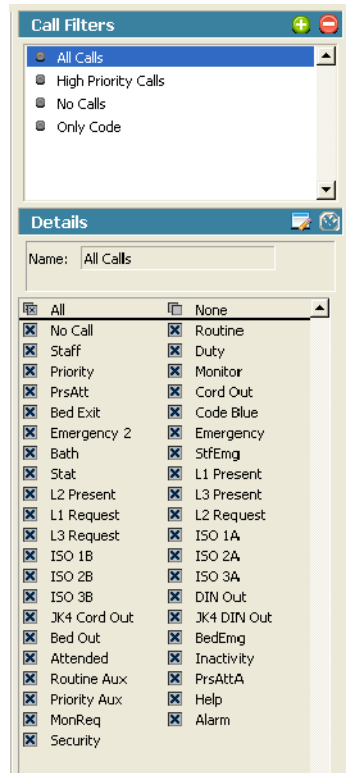
FIGURE 6. Simple Window Panel

Boxes, Buttons and Scroll Bars

A variety of window elements are grouped within the panels found on a window. These elements include (but are not limited to):

- List Boxes, are boxes of a fixed size that contain a data list. If the list in the box exceeds the allotted size of the box, a scroll bar is available.

- Combo Boxes provide the same function as List boxes, but do so via a drop-down list.

- Check Boxes and Radio Buttons are used to indicate user options. (For example, in Figure 6, if only the L3 Staff type check box is enabled, only staff given the L3 designation will receive a page.) Check boxes turn an option on or off, Radio Buttons provide a combination of choices for an option.

- Horizontal and Vertical Scroll Bars provide access to data contained within a list box or panel that does not fit within the immediate viewing area.

Installation Prerequisites

Before beginning installation of the Tek-CARE500 Wireless Emergency Call System, ensure that a site survey has been done by a qualified TekTone representative using the NC500ESSK Site Survey Kit. This is a necessary step to correctly determine what equipment is necessary and where it should be located. A properly done site survey will also identify potential problem areas in a facility so that those issues may be addressed.

The Tek-CARE500 system can include NC511ES Repeater/ Locators, SF501ES mobile Pendant Call Transmitters, and a variety of stationary call transmitters. (These include check-in/assistance stations, emergency switches, room stations, wall-mounted transmitters, motion detectors, smoke detectors, door/window egress transmitters, and universal normally open (NO) or normally closed (NC) transmitters).

FIGURE 7. NC500ESSK Site Survey Kit

Placing Repeater/Locators

This section provides the basics of RF signal propagation. If you have ever performed an RF site survey, you will understand that the following are general guidelines, not hard and fast rules. However, these guidelines are necessary to establish a location network specific to your RF environment.

Free-Space Loss

Free space loss is the loss of signal power as the RF wave spreads over large areas.

RF energy expands outward from its source. Even if all physical obstacles that could absorb and reflect RF waves were removed, the range would still be limited by free-space loss, or attenuation. Free-space loss is defined as the loss of signal power that results from beam divergence, or the geometric spreading of the RF wave over large areas.

RF Signal Range

RF signal range is limited by three factors:
- transmitter power
- receive sensitivity
- physical obstacles.

The range of an RF system depends on three factors. Each of these factors must be considered when establishing location functionality.

Transmitter Power

The power of RF transmissions is the easiest factor to control. The higher the wattage, the louder the transmission. Most transmitters operate at a relatively low wattage to preserve battery life. Line-powered NC511ES Repeater/ Locators, which don't have to consider battery life, can pick up those transmissions and retransmit them at a much higher power. When designing your location network, the power of the transmissions used to establish location will have to be taken into account.

Receive Sensitivity

Receive sensitivity refers to the ability of NC511ES Repeater/Locators and NC510ES Receivers to hear transmissions. The higher the sensitivity, the lower the power at which the repeater/locator or receiver will be able to decode transmissions. Most wireless sensor networks balance maximum sensitivity with affordability in designing repeater/locators and receivers. The sensitivity of the repeater/locator and receiver will be crucial in determining the proximity of a given transmitter in many location networks.

Physical Obstacles

Of the three factors, this is the hardest to control. Many physical objects have an effect on RF signal propagation and must be considered when attempting to determine location. Wireless sensor networks use a number of methods to deal with physical obstacles and interference, but the nature of signal reflection and absorption can present problems for establishing location networks. To establish a reliable method of determining location, the effect of physical objects on RF energy must be considered.

When Radio Signals Encounter Obstacles

RF signals will either pass through obstacles with little signal loss, be reflected by obstacles, or be absorbed by obstacles.

When RF waves are transmitted, the RF signal propagates in all directions. Because RF signals travel along multiple paths simultaneously, they encounter a variety of obstacles along the various routes.

Three things can happen to an RF transmission when it encounters a physical object.

- The transmission can pass through the object with little power loss,
- the transmission can be absorbed,
- the transmission can be reflected.

The reaction of the RF transmission depends on the material of the physical object.

Transmission with Minimal Loss

Although every material absorbs or reflects some of the RF energy, some materials absorb so little that there is no noticeable difference. Typically, these are dry materials, including air, wood, glass, plastic, and drywall. For most purposes these materials can be ignored when considering your RF environment.

Although most windows cause an insignificant power loss and can be ignored, most walls will cause some noticeable loss. A wall constructed solely of drywall would be insignificant, but most are constructed of a variety of materials, including cement that absorbs RF signals, and metal that reflects them.

Absorption

The materials that absorb RF transmissions are typically wet materials. The absorption is rarely complete; some measure of the RF energy will pass through the obstacle, it will just be reduced in power. These materials include vegetation, earth, brick or concrete, and people or animals. It is particularly important to consider people when discussing handheld devices, as the signal will be dramatically decreased if it has to pass through the person activating the pendant.

Larger trees will cause greater loss than smaller trees. Likewise, trees with dense foliage will cause greater loss than trees with little or no foliage. Loss caused by walls will vary greatly. Mirrored walls will cause greater loss than normal interior wall, as will most kinds of exterior walls, especially stucco. Concrete and steel-reinforced floors will create a much greater signal loss than wood floors.

Reflection

Metals can reflect RF signals with little loss of signal power. Reflection is an important part of signal propagation, as it ensures multiple signal paths to the receiving device for each transmission. However those multiple signal paths can cause problems in RF networks, and especially in determining location, as the same signal, depending on how many times it has been reflected, can provide dramatically differing signal strengths.

An object need not be solid metal for an RF signal to bounce off it. RF signals will treat metallic coating as solid metal. Likewise, they will treat a chain link fence as a metal wall, as long as the opening of the links is small enough in relation to the wavelength to reflect the transmission.

Realistic RF Expectations

RF environments are dynamic and highly variable; there is no substitute for RF testing.

The following considerations will help you design and maintain your wireless sensor network location system:

- While RF signal strength does get weaker with distance, RF performance is variable and will change as the environment changes.
- Any changes in building construction, or in the size of the building will impact system design and operation. New construction materials between transmitters, receivers, and repeater/locators can dramatically cut down on signal propagation.
- Likewise, on a larger campus, increased vegetation between buildings will impact RF signal propagation. Signal propagation is easier in the winter than in the summer. Varying foliage due to seasonal change must be taken into account considering RF signal propagation.
- Every building is different. The concrete and metal used in construction will establish your RF environment, as will the placement of obstacles within the building. Unfortunately, it is often difficult, if not impossible, to determine all the construction materials used in any single site.
- Metal structures such as elevators, vaults, etc. will cause reflection. In a structure that is primarily metal, RF signals may have a difficult time escaping to a receiver or repeater/locator.
- Perform extensive and repeated testing, recognizing that wireless performance is variable, and can change over time.
- Conduct a wireless survey using TekTone's NC500ESSK Site Survey Kit to establish your location network. The survey kit is used to measure the signal strength of repeater/locator, transmitter, and receiver messages, and will be helpful no matter what method you use to establish location.

Methods of Determining Location

With the basics of RF signal propagation in mind we can turn to methods of determining location. Each of the following methods uses the placement of location devices to locate a transmitter in different ways. Generally speaking, the simpler the location method, the less accurate it will be. The following methods are presented in order of complexity, with the simplest solution first.

- RF Signal
- Nearest Neighbor

RF Signal

The RF signal method of location is the simplest, but the least precise.

This method uses location devices placed so that only the location devices covering a specific area, such as a single building in a multi-building campus, will hear any RF transmission. This is the simplest method of determining location and uses only the presence of a transmitter's RF transmission to determine the nearest location device.

However, because location devices are commonly spaced hundreds of feet apart, location accuracy is fairly low. Furthermore, this method cannot provide the direction of the transmitter in proximity to the location device.

The results can also be uncertain, depending on the physical obstacles between a transmitter and a location device. For instance, a location device that is 100 feet away might hear a transmitter, where a location device that is only 50 feet away, but behind a cement wall, might not.

Moreover, because RF signals propagate between building floors, this method cannot be used to establish location on a specific floor in a multi-level building.

In some RF environments, such as large campuses with a lot of open space between the buildings, this might be allthat is needed for determining location. It might be sufficient to know just the particular building in a multi-building facility where a transmitter is located.
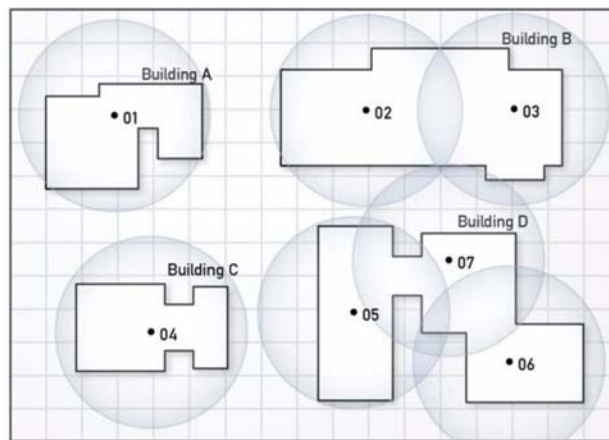
FIGURE 8. Seven location devices installed across a multi-building facility.

As shown in Figure 8, if location device 2 or 3 were to pick up a transmission from a transmitter, it could be assumed the transmitter was activated in building B. Likewise, if location device 5, 6, or 7 were to pick up a transmission from a transmitter, it could be assumed that the transmitter was activated in building D.

This system is relatively simple, but, as Figure 8 shows, not very precise.

TABLE 1. RF Signal Pros and Cons

Pros	Cons
Simple	Very low resolution
Very low level of development effort	Can't provide the direction of the end device in proximity to the location device
Easy to install	Physical obstacles can skew results

Nearest Neighbor

Fairly high resolution can be achieved using the nearest neighbor method, but a large number of location devices must be used.

Using the nearest neighbor method, location devices provide the signal strength of each transmission to an application, and the application then uses the signal strength to determine the location device nearest the transmission.

As with the previous method, physical obstacles can create uncertain results.
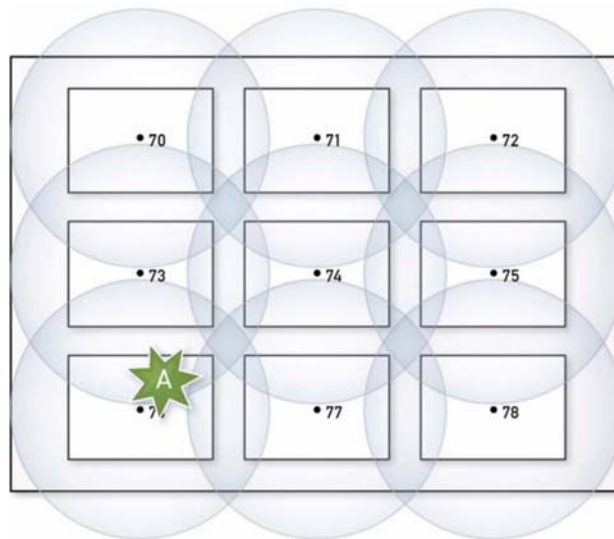
FIGURE 9. Nearest neighbor at one building

As shown in Figure 9, if location device 73 or 76 were to pick up a transmission from transmitter A, the signal strength reported by location device 76 should be higher than that reported by location device 73.

As additional location devices are used, additional accuracy is provided, and with enough location devices, location on a particular floor in a multi-level building could be determined. As shown in Figure 10 if location device 76, 80,

and 84 were to pick up a transmission from transmitter A, it could be assumed that the transmitter is closest to location device 80.
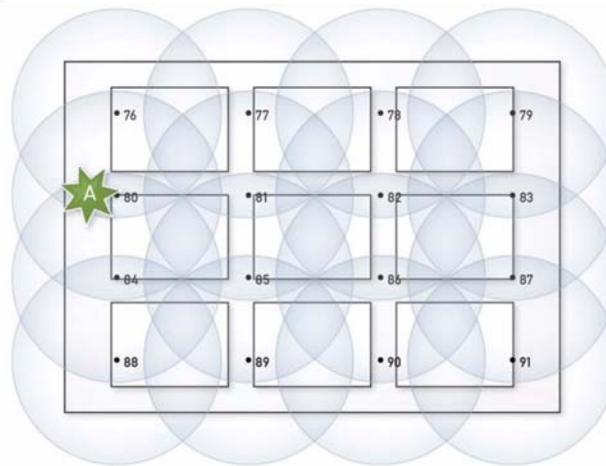
FIGURE 10. Nearest neighbor with additional location devices

In a system with a large number of location devices, a relatively high resolution could be achieved. However, using too many location devices could create enough RF traffic that messages might have trouble making it through the network to the receiver.

TABLE 2. Nearest Neighbor Pros and Cons

Pros	Cons
Small level of development effort	Can't provide the direction of the end device in proximity to the location device
Easy to install	Physical obstacles can skew results
Scalable resolution	
Location possible in multi-level buildings	

Site Preparation and Wiring Requirements

Prior to installation, an area in which the TekTone NC501ES Master Station Computer and NC510ES Receiver will be installed must be designated. This area requires access to standard 110V connections. TekTone strongly recommends that this equipment be protected with an uninterruptible power source and/or other battery backup.

In an assisted living facility that has a generator, the emergency system will have two different types of emergency power:

• Life Safety branch, which is for lighting, Exit signs, fire alarms, etc.
• Emergency Critical Branch, which can be used for nurse call, emergency call, door security, etc.

NOTE:

In some instances, transmitters or repeater/ locators can be tied into the circuit used for the Exit lights. Before installing in this manner, ensure that the installation is not in violation of any electrical code.

When equipment is to be flush mounted, and backboxes have been provided by another contractor, inspect the site before beginning the installation to ensure that backboxes are either plastic or fiberglass. The transmitters will not transmit through metal backboxes. Resolving this problem early will make the final installation run smoother.

2   *System Components*

A basic TekTone Tek-CARE500 Wireless Emergency Call System with EchoStream Technology includes an NC501ES Master Station Computer, an NC510ES Receiver, and at least one transmitter. Depending upon the type of facility into which it will be installed, the system can be expanded to include paging, resident check-in devices, door and window alarms, smoke detectors, motion detectors, battery backup, etc.

The Tek-CARE500 components are described in these sections:

- *Master Controls* on page 16
- *Optional Receivers and Pagers* on page 19
- *Transmitters* on page 20
- *Miscellaneous* on page 28
- *Battery Information* on page 30

> **NOTE:**
>
> For more detailed information, see individual specification sheets on our website: www.tektone.com.

Master Controls

The centrally located equipment that controls the primary functions of the Tek-CARE500 system is described here.

Master Station Computer

The NC501ES Master Station Computer is the core component of the Tek-CARE500 system, and the primary means of annunciation for the system. (All other devices, including pagers, remote event monitors, and any other messaging systems, are secondary and unsupervised means of annunciation.)

To respond to calls, staff must have access to certain features that are available only on the NC501ES Master Station Computer. These features include the ability to clear calls from some transmitter types, to view resident and transmitter information, and to view call locations. Therefore, locate the NC501ES Master Station Computer in an area where primary caregiving staff has full access.

FIGURE 11. NC501ES Master Station Computer Monitor, Keyboard And Mouse

Receivers

The NC510ES Receiver connects directly to the master station computer. The receiver transfers information received from ES transmitters in the field to the Tek-CARE500 Master Station Computer.
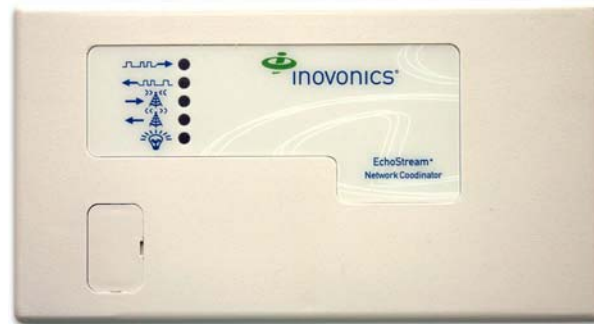
FIGURE 12. NC510ES Receiver

The NC510 Receiver transfers information received from FA transmitters in the field to the Tek-CARE500 Master Station Computer.

FIGURE 13. NC510 Receiver

Paging Transmitter

When paging is a required part of a facility's system, the NC365A or NC369 Paging Transmitter is connected directly to the NC501ES Master Station Computer. The paging transmitter enables automatic and manual staff paging, when used with NC399P Pagers.

FIGURE 14. NC369 Paging Transmitter

Alarm Panel

The NC502 PC Alarm Panel is used to send alarms to a central monitoring station. This device provides the interface between the master station computer and telephone service. It requires a separate telephone line (POTS) that is not connected to the facility's existing telephone system or PBX.

FIGURE 15. NC502 PC-Alarm Panel

Optional Receivers and Pagers

Remote LCD Receiver

The NC505ES Remote LCD Receiver is used to connect external dome lamps and dialers to the system, providing an additional annunciation path to the normal Tek-CARE500 screen. The NC505ES is not dependant upon the NC501ES Master Station Computer, and does not annunciate signals from the NC510ES Receiver.
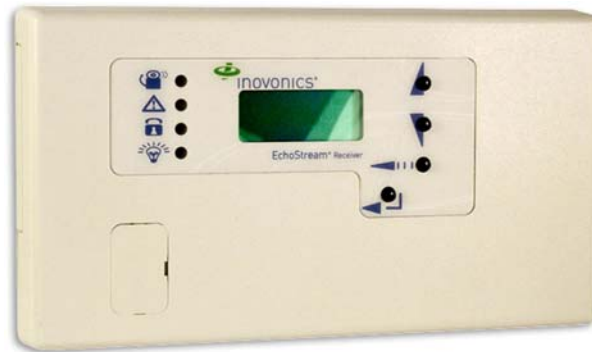
FIGURE 16. NC505ES Remote LCD Receiver

Pager

The NC399P Alphanumeric Pager receives automatic and manual paging messages from the Tek-CARE500 system, via the NC365A or NC369 Paging Transmitter.

FIGURE 17. NC399P Alphanumeric Pager

Transmitters

Install the equipment described in this section in locations such as resident's rooms, common areas and hallways.

The Tek-CARE500 system can include these types of transmitters:

- Repeater/Locator
- Pendant
- Wall-Mounted Call
- Smoke Detector
- Motion Detector
- Door/Window Egress
- Universal Contact
- Emergency Switch
- Check-In/Assistance
- Room Station

Repeater/Locator

The NC511ES Repeater/Locator extends the transmission range of transmitters and determines the approximate location of roaming transmitters. An optional IH511 weatherproof housing is available for indoor or outdoor use.

The NC511ES includes an integrated backup battery.
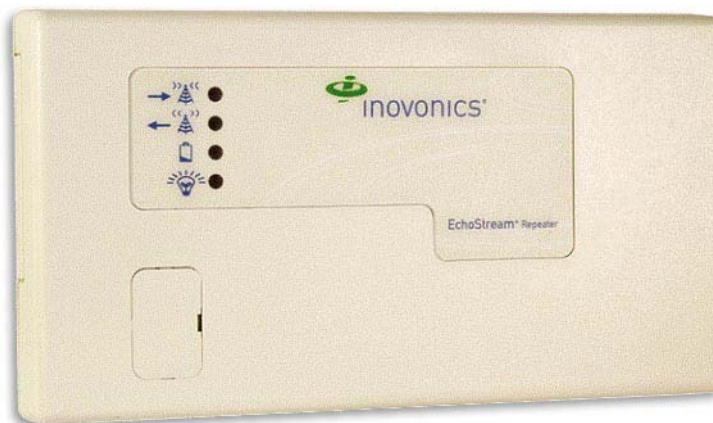
FIGURE 18. NC511ES Repeater/Locator

Wall Mounted Call Transmitter

The SF502ES Wall-Mounted Call Transmitter places an alarm signal that can be reset only at the Tek-CARE500 NC501ES Master Station Computer. It can also be used as a resident check-in button. It includes an attachable necklace for use as a portable transmitter.

FIGURE 19. SF502ES Wall-Mounted Call Transmitter

Water-Resistant Single Button Pendant Call Transmitter

The SF501ES Water-Resistant Single Button Pendant Call Transmitter is a pendant transmitter with attachable necklace and belt clip. The SF501ES places an alarm signal that can be reset only by pressing the reset button on its reverse side. (The reset button is small and is recessed into the casing. Use a blunt instrument, such as a ball point pen, to depress the button.)

To place a call, press the large call button for one second.

FIGURE 20. SF501ES Water-Resistant Single Button Call Transmitter

Water-Resistant Dual Button Pendant Call Transmitter

The SF501/2ES Water-Resistant Dual Button Pendant Call Transmitter is a pendant transmitter with attachable necklace and belt clip. The SF501/2ES places an alarm signal that can be reset only by pressing the reset button on its reverse side. (The reset button is small and is recessed into the casing. Use a blunt instrument, such as a ball point pen, to depress the button.)

To place a call, press both call buttons simultaneously for one second.

FIGURE 21. SF501ES/2 Water-resistant Dual Button Call Transmitter

Door/Window Egress Transmitter

The SF520ES Door/Window Egress Transmitter is used to monitor door and window activity. It may be used as either NO or NC to allow for a variety of applications. Alarms are either automatically reset when returned to a normal state, or are reset at the NC501ES Master Station Computer, depending upon programming.

FIGURE 22. SF520ES Door/Window Egress Transmitter

NO/NC Universal Contact Transmitters

The SF525ES and SF525/2ES Universal Contact Transmitters are used with any standard NO or NC switch for a variety of applications. The SF525ES includes one selectable NO/NC input; the SF525/2ES includes one selectable NO/NC input, plus an NC-only input. the secondary (NC-only) input's call type has not been preassigned; its call type must be assigned using the Hardware tab of the LS500 Config Tool. Alarms are either automatically reset when returned to a normal state, or are reset at the NC501ES Master Station Computer, depending upon programming.

FIGURE 23. SF525ES, SF525/2ES NO/NC Universal Contact Transmitter

Wireless Support Module

When the SF527ES Wireless Support Module is connected to an SF337C Waterproof or SF339 Pushbutton Emergency Switch, the switch operates as a wireless device. The SF527ES/SF337C assembly is used in showers and bathrooms, or anywhere a high priority call is desired. The SF527ES/SF339 assembly is easily activated, so that calls can be placed using an elbow, shoulder, etc. Alarms must be reset at the point of origin.

FIGURE 24. SF527ES Wireless Support Module

FIGURE 25. SF337C Waterproof Emergency Switch

FIGURE 26. SF339 Pushbutton Emergency Switch

Wireless Resident Check-In/Assistance Call Station

The SF529ES Wireless Resident Check-In and Assistance Station is used where a high priority call and resident check-in is desired. High priority calls must be reset at point of origin.

FIGURE 27. SF529ES Wireless Resident Check-In/Assistance Station

Room Station

The SF530ES Room Station is used where call cord usage is desired. Alarms must be reset at point of origin. Call cord must remain plugged in to prevent battery drain.

FIGURE 28. SF530ES Room Station

Wireless Emergency Switch

The SF531ES Wireless Emergency Switch (not waterproof) is used where a high priority call is desired, but does not require protection from water. Alarms must be reset at point of origin.

FIGURE 29. SF531ES Wireless Emergency Switch

Smoke Detector

The SF505ES Wireless Smoke Detector transmits an alarm signal when the smoke detector is activated. The signal will be reset automatically when the detector is clear of all smoke.

FIGURE 30. SF505ES Wireless Smoke Detector

Motion Detector

The SF515ES Passive Infra-Red Motion Detector is sensitive to moving heat (infrared radiation). It can be used as a check-in device or a security device by monitoring activity.

FIGURE 31. SF515ES Passive Infra-Red Motion Detector

Miscellaneous

Weatherproof Housing

The IH511 Weatherproof Housing provides indoor or outdoor mounting of an NC511ES Repeater/Locator.

FIGURE 32. IH511 Weatherproof Housing

Single-Gang Back Box

The IH527 Surface-Mount Single-Gang Plastic Back Box is used for the SF530ES Room Station, the SF527ES/SF337C Waterproof Emergency Switch assembly, or the SF527ES/SF339 Pushbutton Emergency Switch Assembly. To flush mount, use a plastic box that does not interfere with RF signals.

FIGURE 33. IH527 Surface-Mount Single-Gang Plastic Back Box

Surface Mount Single-Gang Back Box

The IH528 Surface-Mount Single-Gang Plastic Back Box is a lower-profile box for SF529ES Check-In/Assistance Stations and SF531ES Emergency Switches. To flush mount, use a plastic box that does not interfere with RF signals.

FIGURE 34. IH528 Surface-Mount Single-Gang Plastic Back Box

Other Equipment

PK510 Power Supply and PC Interconnect

Convenient cable assembly that supplies power to the NC510ES Receiver and a serial connection from the NC510ES Receiver to the NC501ES Master Station Computer.

RP501 Replacement Accessory Kit

Replacement necklace and belt clip for the SF501ES and SF501/2ES call transmitters.

RP503 Small Wristband

Wristband for the SF501ES call transmitter. Fits 5" to 6 1/2" wrists.

RP504 Large Wristband

Wristband for the SF501ES call transmitter. Fits 6 1/2" to 8" wrists.

Battery Information

BA501

Replacement Battery for SF501ES

BA502

Replacement Battery for SF502ES

BA511

Backup Battery for NC511ES

3 Overview of the Installation Process and Tools

To install the Tek-CARE500, the hardware must be physically installed and the software must be programmed to meet the requirements set by the facility.

The bulk of the software setup for a new installation can often be completed in the installing company's workshop, or the programming can be completed on-site. How the installation is completed will depend upon many factors, including:

- size of the facility
- amount and types of devices to be installed
- convenience for the installer, and for the staff and residents at the facility

Installation Process

The following table provides a basic outline of the steps to be followed when installing a new Tek-CARE500 and its remote equipment; also included are references providing the location of the instructions for completing each step.

TABLE 3. Outline of Steps to Complete a New Installation

Step	Instructions are found here:
Set up head-end equipment	***Install the NC501ES Master Station Computer and NC510ES Receiver*** on page 50
System Programming with the LS500 Config Tool	***System Setup, Programming Using the LS500 Config Tool*** on page 61
Add Locations	***Locations*** on page 64
Set Up Resident Information fields and add Residents	***Residents*** on page 67
Enable FA and/or ES	***Transmitters*** on page 70
Set up Check-in Times	***Check In*** on page 71
Set Up Call Types	***Call Types and Hardware*** on page 73
Set Up Hardware Types	***Call Types and Hardware*** on page 73
Set up Zones	***Zones*** on page 76
Set up Pagers	***Pagers*** on page 78
Set Up Staff	***Staff*** on page 80
Staff Assignments	***Assignments*** on page 83
Set up Central Monitoring	***Central Monitoring*** on page 85
Set up Password Protection	***Password Protection*** on page 89
Save the Configuration	***Save and Implement the Custom Configuration*** on page 90
System Programming with the LS501 Event Monitor	***System Setup, Programming Using the LS501 Event Monitor*** on page 91
Add Transmitters	***Add Transmitters*** on page 92
Add Residents	***Add Residents and Assign Them to Locations*** on page 94
Assign Pendant Transmitters	***Assign Pendant Transmitters to Residents*** on page 97
Assign Check-In Times	***Assign Check-In Times to Check-In Transmitters*** on page 100 ***Assign Transmitters to Zones*** on page 102
Add Staff	***Add Staff*** on page 103
Create Staff Groups	***Create Staff Groups*** on page 104
Create Staff Assignments	***Create Assignments*** on page 105
Save the Configuration	***Save the Configuration*** on page 107
Print the Central Monitoring Device List	***Print the Central Monitoring Device List*** on page 108

TABLE 3. Outline of Steps to Complete a New Installation (Continued)

Step	Instructions are found here:
Physically Install hardware	***Complete the Installation*** on page 109
Test the system	***Test the Installation*** on page 110
Add Remote Event Monitors	***Add an LS586 Remote Event Monitor*** on page 114

These instructions are provided for use when upgrading an existing NC501 or NC501A to include the EchoStream technology:

- ***Step 1: Upgrade the Master Station Computer*** on page 52
- ***Step 2: Install New ES Equipment*** on page 55
- ***Step 3: Reinstall the FA Equipment*** on page 55 (if required)
- ***Step 4: Program the FA Transmitters*** on page 56 (if required)

To Install one or more LS586 Remote Event Monitors, see ***Add an LS586 Remote Event Monitor*** on page 114.

Programming Tools

The LS500 Config Tool and the LS501 Event Monitor are used to set up and use the Tek-CARE500. These software tools come from the factory pre-installed on the NC501ES Master Station Computer.

Use the desktop icons that appear on the monitor's screen to access the software.

FIGURE 35. LS501 Event Monitor Desktop Icon

FIGURE 36. LS500 Config Tool Desktop Icon

The LS501 Event Monitor software is the primary interface between the end-user and the Tek-CARE500. Staff members at the facility will access the LS501 to monitor calls that are placed from wireless transmitters, to send pages to the staff, and to generate reports.

During installation of the Tek-CARE500, the LS501 Event Monitor is also used to capture transmitter information (device numbers) and to assign transmitters to locations.

NOTE:

Reminder: To appear in the Event Monitor, changes made using the Config Tool must be saved and committed.

The LS500 Config Tool is used during installation to configure the Tek-CARE500 for use. The Config Tool is not generally used by the facility's staff unless that user is a system administrator who is familiar with the Tek-CARE500 and its requirements.

The LS500 Config Tool is used during installation to:
- Create the data fields that appear in the LS501 Event Monitor
- Add and identify equipment
- Set up zones for paging, locators and transmitters
- Assign equipment to defined zones
- Add staff information, create check-in times, etc.

> **NOTE:**
>
> A third component of the Tek-CARE500 is the LS586 Event Monitor
> software, which is a client of the LS501 Event Monitor that can be installed
> on other Windows XP computers installed on the facility's network. The
> LS586 Event Monitor gives the facility's staff the ability to monitor traffic,
> send messages to pagers, and generate reports. Changes to resident
> information, and to system programming are not allowed. (The
> Tek-CARE500 allows up to nine concurrent LS586 clients.) See ***Add an
> LS586 Remote Event Monitor*** on page 114.

LS501 Event Monitor

The software associated with the LS501 Event Monitor must be running on the
master station computer before other Tek-CARE500 software can be used.
Double-click the **LS501 Event Monitor** icon to start the program. The LS501
Event Monitor background window and the LS501 Event Monitor window
appear automatically. When hardware has not been connected, faults will be
displayed in the LS501 Event Monitor window.
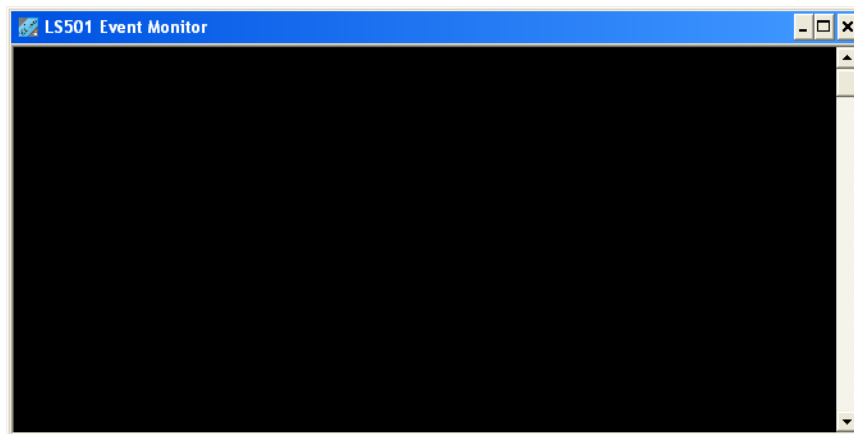
FIGURE 37. LS501 Event Monitor Background Application Window
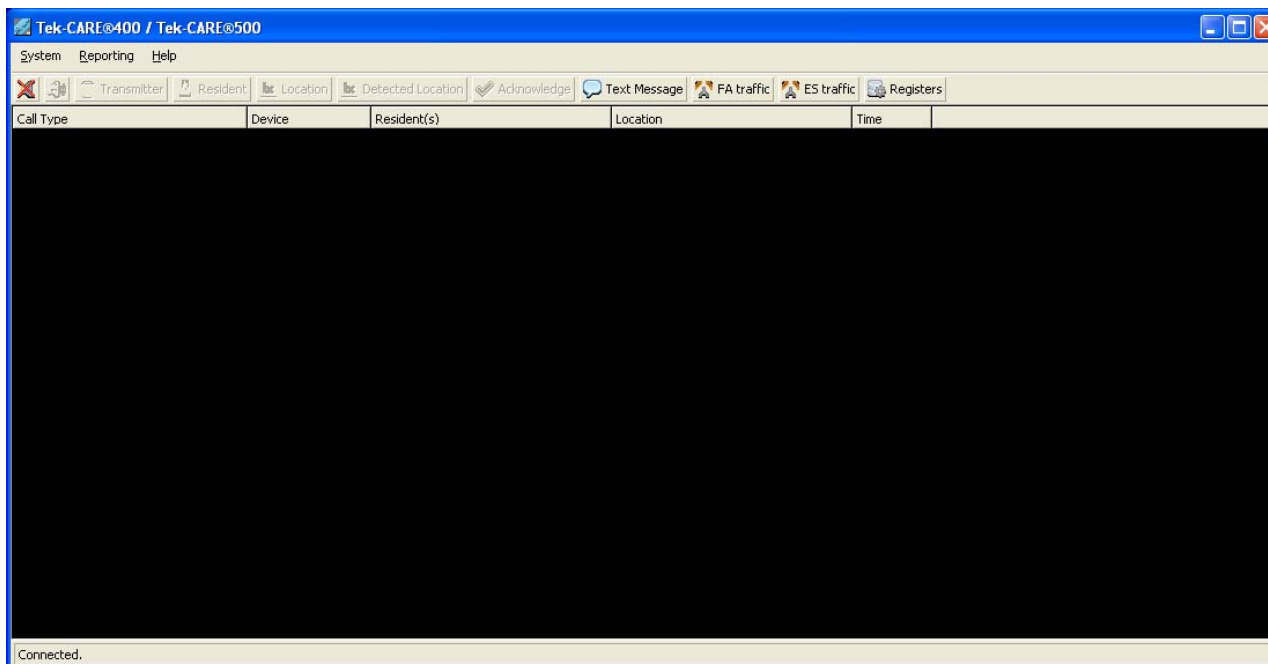
FIGURE 38. LS501 Event Monitor Window

When opened, there are two windows that are referred to as the LS501 Event Monitor. The first window is called the *LS501 Event Monitor*; this software runs in the background. It does not need to remain visible on the computer's screen as it functions, and can be minimized. All events related to the Tek-CARE500 system are listed on this screen as they are received by the system.

The second window is labeled *Tek-CARE®400 / Tek-CARE®500.* This window provides the interface between the information collected by the software and the user. This is the window that is used by the facility's staff to monitor traffic, and to collect data from transmitters during installation.

After the Event Monitor window is open, click the Registers button to display the panels described in the following table.

TABLE 4. Registers

Tab	Panel Contents
Residents	Contains data about each resident. The fields are added using the Config Tool during installation.
Transmitters	Contains factory-defined data fields for each transmitter and receiver. Use this window to capture Dev #'s and define the transmitter or repeater/locator to the Tek-CARE500.
Staff	Contains staff detail fields that can be used when entering staff member names to the system.

TABLE 4. Registers (Continued)

Tab	Panel Contents
Staff Groups	Allows assignment of staff members to specific groups, for example: Nurses, Aides, Maintenance, Housekeeping, etc.
Assignments	Allows assignment of specific devices to staff members. Used to assign pagers.
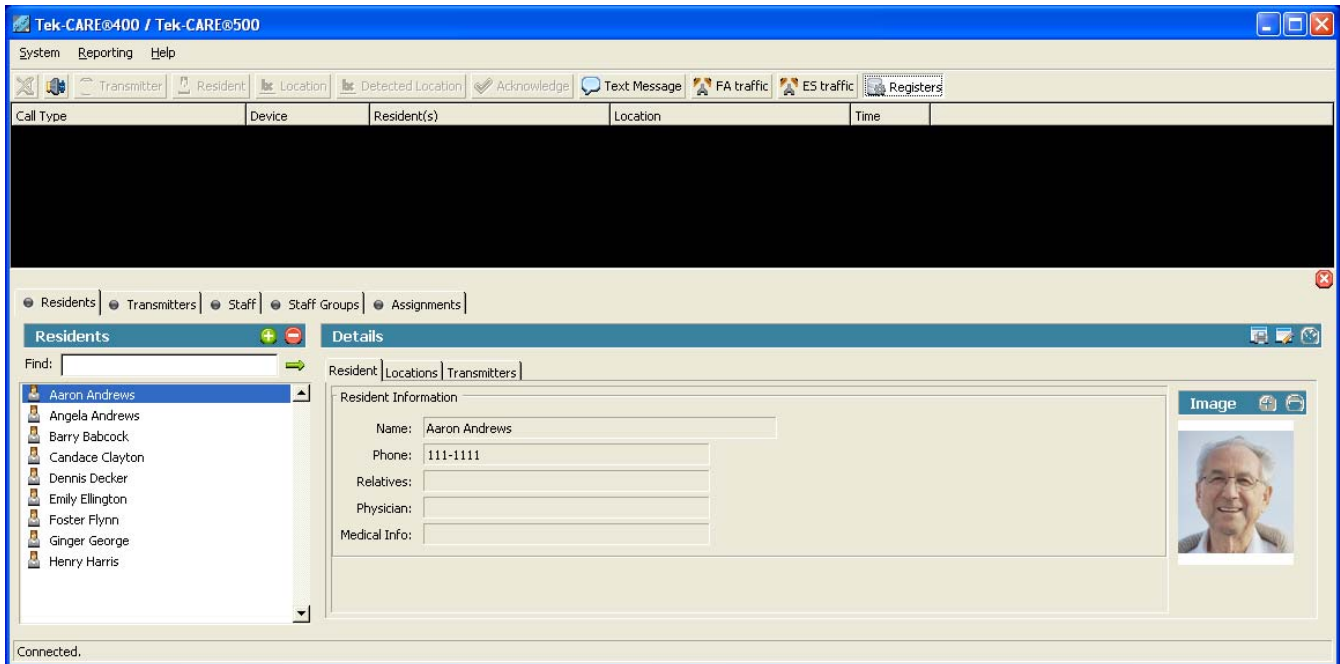
FIGURE 39. LS501 Event Monitor Registers

The Tek-CARE500 Event Monitor Operating Window

This section provides a brief description of the various parts of the operating window.

Double-click the **LS501 Event Monitor** icon to open the Event Monitor window.

FIGURE 40. LS501 Event Monitor Icon

After the system loads the LS501 Event Monitor, click on the **Registers** button to open the programming and site information registers. At this point the display on the control panel will resemble the figure below.

Menu and Button Bars →

Call Display →

Register Tabs →

Register Panels →
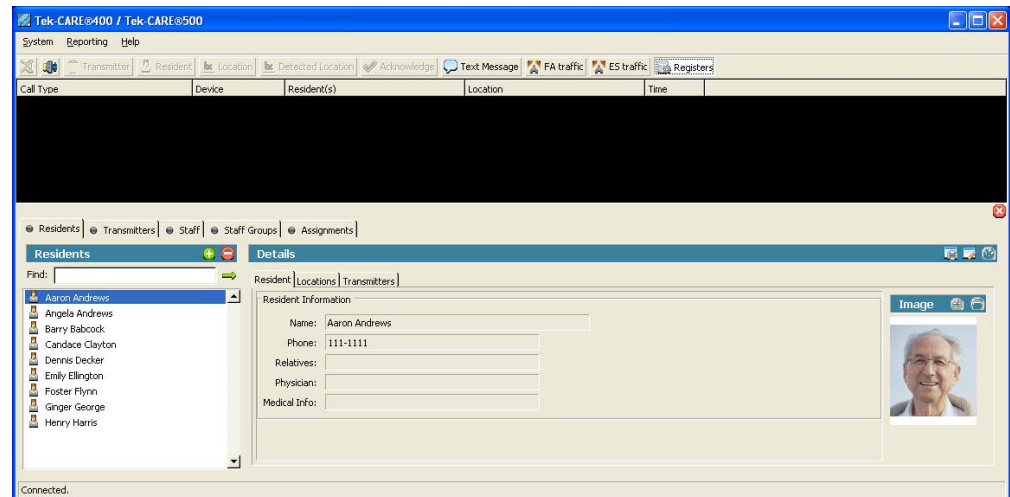
FIGURE 41. LS501 Event Monitor Window

The main components of the event monitor's window are listed here:

- **Menu Bar**
  Menu items are available to clear a monitor fault (System menu), to exit the Event Monitor program (System menu), to Launch Reporting (Reporting menu), to view the Low Battery Report (Reporting menu), and to view the software version number (Help menu).

- **Button Bar**
  This bar includes buttons used to silence (or "unsilence") non-emergency call tones; show transmitter information, resident information, or location of a call displayed in the Event Monitor; acknowledge (cancel) a call from some types of transmitters; send a page; view transmitter signal traffic; and display or hide the Registers.

- **Call Display**
  This area displays a list of currently active calls. The following information is provided for each active call:

  - Call Type
  - Transmitter device number
  - Resident name
  - Location
  - Time elapsed since the call was initiated.

- **Registers**

  This area consists of Registers that are accessed by clicking on the various Register tabs. The Registers are used to view and modify information about:

  - Residents
  - Transmitters
  - Staff
  - Staff groups
  - Assignments

Menu Bar

The Menu Bar provides access to the following drop-down menus:

- **System Menu**

  - **Redetect**

    Clears a Monitor Fault from the LS501 Event Monitor window. A monitor fault occurs when a Remote Event Monitor PC closes its copy of the LS586 Remote Event Monitor software.

  - **Exit Alt-F4**

    Closes all interfaces and terminates the Tek-CARE500 software application. No information will be displayed or logged when the software is not running. (The Alt+F4 combination performs the same function.)

- **Reporting Menu**

  - **Launch Reporting**

    Starts the Tek-CARE500 Reporting System.

  - **Low Battery Report**

    Creates the Tek-CARE500 Low Battery Report, which shows the transmitter ID (Dev #), hardware type, location and resident associated with transmitters that need new batteries.

- **Help Menu**

  - **About Tek-CARE500**

    Displays the software version number.

Buttons

The buttons found on the LS501 Event Monitor's button bar are:

- **Silence**

  Used to turn alarm tones off. Emergency alarm tones cannot be silenced. (Click on an event in the call display, then click on the button.)

- **Unsilence**

  Used to turn alarm tones on. (Click on an event in the call display, then click on the button.)

- **Transmitter**
  Used to display the calling transmitter's Register information. (Click on an event in the call display, then click on the button.)

- **Resident**
  Used to display the calling resident's Register information. (Click on an event in the call display, then click on the button.)

- **Location**
  Used to display the proximity map with the calling transmitter's location highlighted. (SF501ES and SF501/2ES Pendant Transmitters display the default location.) (Click on an event in the call display, then click on the button.)

- **Detected Location**
  Used to display the location of a call initiated from an SF501ES or SF501/2ES Pendant Transmitter. (Requires NC511ES Repeater/Locators.) (Click on a call from a pendant transmitter in the call display, then click on the button. A proximity map showing the location of the repeater/locator receiving the strongest signal is displayed.)

- **Acknowledge**
  Used to reset a call that does not require resetting at the point of origin, and remove it from the list. (Click on an event in the call display, then click on the button.)

- **Text Message**
  Click on this button to send a custom page to one or more staff members, staff groups, or staff types. (Disabled unless RF Paging is enabled.)

- **FA Traffic**
  Click on this button to view the signals that the NC510 Receiver is receiving from FA transmitters. This button is primarily used for troubleshooting, and while adding new FA transmitters to the system.

- **ES Traffic**
  Click on this button to view the signals that the NC510ES Receiver is receiving from ES transmitters. This button is primarily used for troubleshooting, and while adding new ES transmitters to the system.

- **Registers**
  Click on this button to display the systems registers.

Registers

Click on the Registers button at the top right of the Event Monitor window to access the registers listed here. To view a specific register, select its corresponding tab. These registers are available:

- **Residents**
  This register displays a list of residents, along with tabbed panes that display resident information, assigned locations, and assigned transmitters. It is also used to add or remove residents from the system.

- **Transmitters**
  This register displays a list of all transmitters and repeater/locators in the system. Tabbed panes show additional information about the transmitter, including its location, assigned resident, device number, its zones, and supervision. It is also used to add or remove transmitters from the system, and to assign transmitters to residents

- **Zones**
  This register displays a list of all zones, and allows zones to be renamed to something that is meaningful to the facility's staff. It is also used to add or remove zones.

- **Staff**
  This register displays a list of all staff and their assigned pagers. It is also used to add or remove staff members and to assign pagers to staff members. (See *Pagers* on page 78.)

- **Staff Groups**
  This register displays a list of all staff groups. It is also used to add or remove groups and to assign staff members to the groups.

- **Assignments**
  This register displays a list of staff assignments. It is also used to assign or remove annunciation of individual transmitters and zones to specific staff members, staff groups, staff shifts or staff levels.

The Tek-CARE 500 LS500 Config Tool

To use the LS500 Config Tool, the LS501 Event Monitor must be running. Double-click the **LS501 Event Monito**r icon on the desktop to start that software. After the Event Monitor has started, click on the **LS500 Config Tool** icon. A startup window opens:
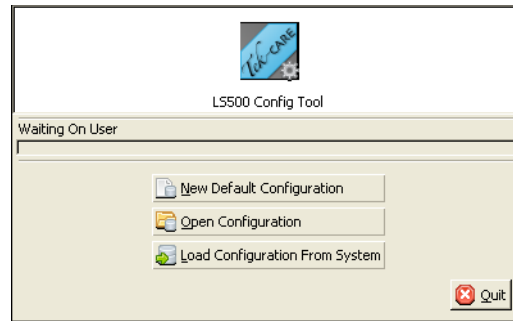
FIGURE 42. LS500 Config Tool Startup Window

Choose the source from which to load data. These options are available:
* New Default Configuration
* Open Configuration
* Load Configuration From System

When opening the LS500 Config Tool for the first time (during a new installation), use the **New Default Configuration** option. The New Default configuration option can also be used to restart the installation from factory defaults. Do not use this option when valid data has been entered and saved either to the Tek-CARE500 network, or to a saved file. All data will be overwritten by a blank configuration.

To use data that has been entered, saved and committed to the Tek-CARE500 network, choose **Load Configuration From System**. This loads the current LS501 Event Monitor configuration, including transmitters, locators and repeaters that have been added to the system.

To use a previously saved configuration, use the **Open Configuration** option, browse to the desired file, click on the file and then click **Open**. A saved configuration is a backup of the system configuration for use in the event of a system failure.

> **NOTE:**
>
> Remember, always follow these basic steps when using the LS500 Config Tool to make changes to the Tek-CARE500 data:
> - Make the changes
> - Save the changes to a file
> - Commit the changes to the Tek-CARE500 network
>
> When these steps are followed, it will always be possible to load the data from the **Network** (after the initial load from Default).

When opened from Default, the Config Tool window looks like this:
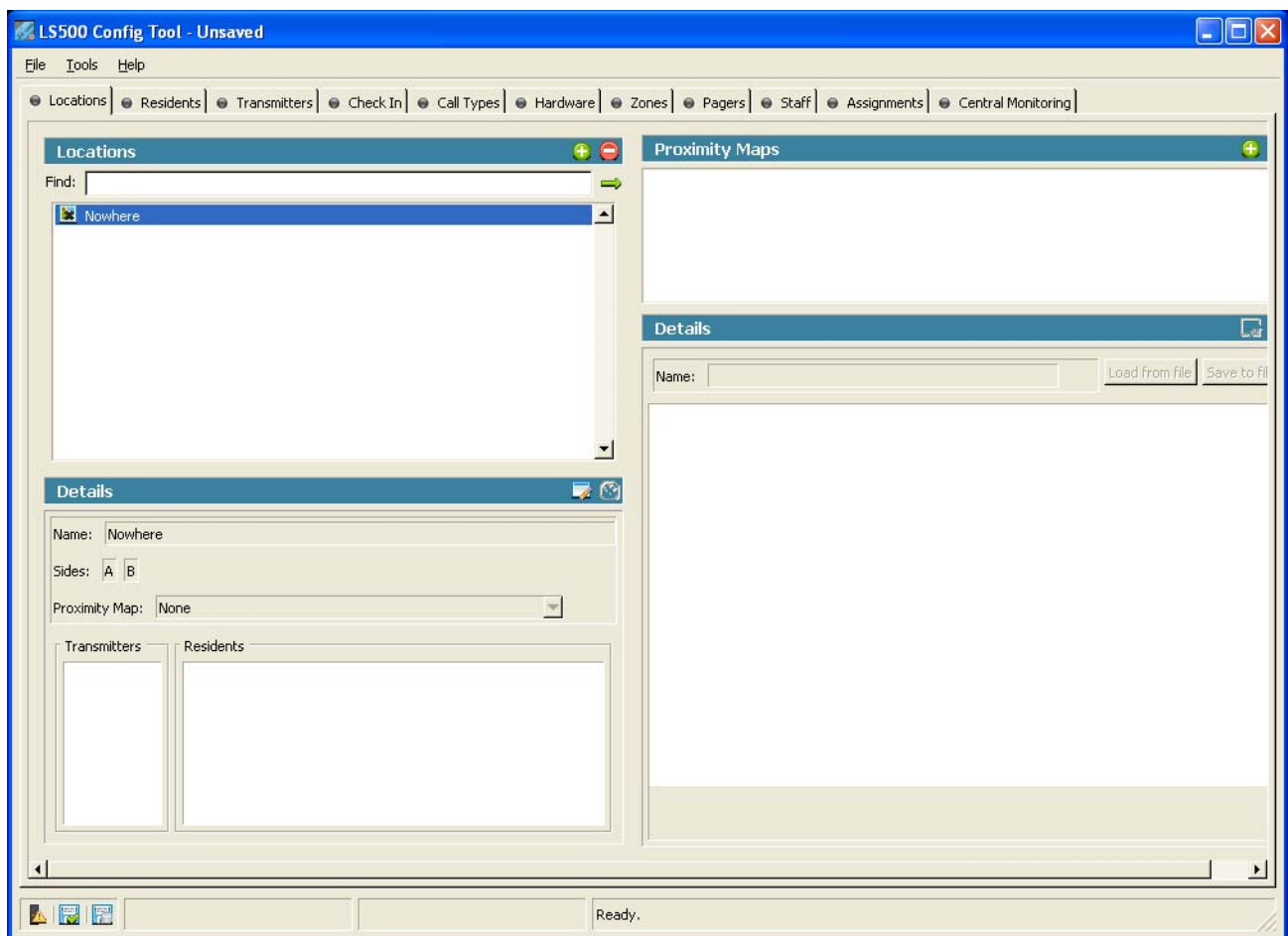
FIGURE 43. LS500 Config Tool Window (Default)

Config Tool Header and Buttons

The main menu bar and tabs at the top of the Config Tool window provide access to the functions listed below.
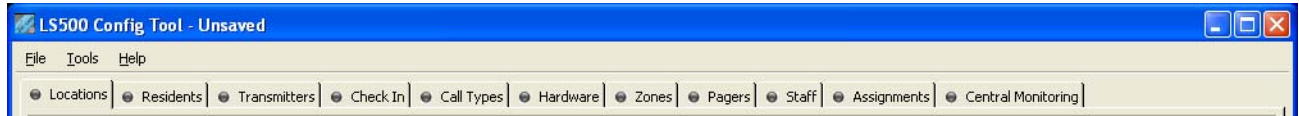
FIGURE 44. LS500 Config Tool Header

Menu Options

Use the File menu to access these options:

- **New Default Configuration** to start a new configuration.
- **Open Configuration** to open a saved configuration file.
- **Load Configuration From System** to load programmed information from the Tek-CARE500 network into the Config Tool.
- **Consistency Check** to check for errors during configuration and setup. Lists and describes invalid entries and programming conflicts.
- **Save Configuration** to save the current programming configuration to a file. (During an initial save the system requires entry of a file name.)
- **Save Configuration As** to save the current programming configuration into a new file.
- **Commit Configuration to System** to send updated programming information to the Tek-CARE500 network so that they can be displayed by the LS501 Event Monitor.
- **Quit** to close the Config Tool.

Use the Tools menu to access these options:

- **Password Manager**
  used to create and change passwords for the system.
- **Central Monitoring Device List**
  used when Central Monitoring is active to set options and preferences for that capability.

The Help Menu provides information about the current software version.

Tabs

Use the tabs at the top of the window to access programming information. Descriptions of the LS500 Config Tool Tabs are located on the following pages:

- *Locations* on page 64
- *Residents* on page 67
- *Transmitters* on page 70
- *Check In* on page 71
- *Call Types and Hardware* on page 73
- *Zones* on page 76
- *Pagers* on page 78
- *Staff* on page 80
- *Assignments* on page 83
- *Central Monitoring* on page 85

Buttons

The buttons shown in the following table are used to add, modify and delete items entered in the Config Tool's window, or to cancel data entry prior to saving.

TABLE 5. Config Tool Buttons

Button	Function
	Add another item.
	Delete the selected item.
	Edit the selected item.
	Apply the changes made to the selected item.
	Cancel the changes made to the selected item.

When editing, the borders of the panel being edited and the icon on the current tab turn red. When a red border is placed around a data entry panel, **Apply**, **Edit**, or **Cancel** must be clicked before information can be added or changed in any other panel.
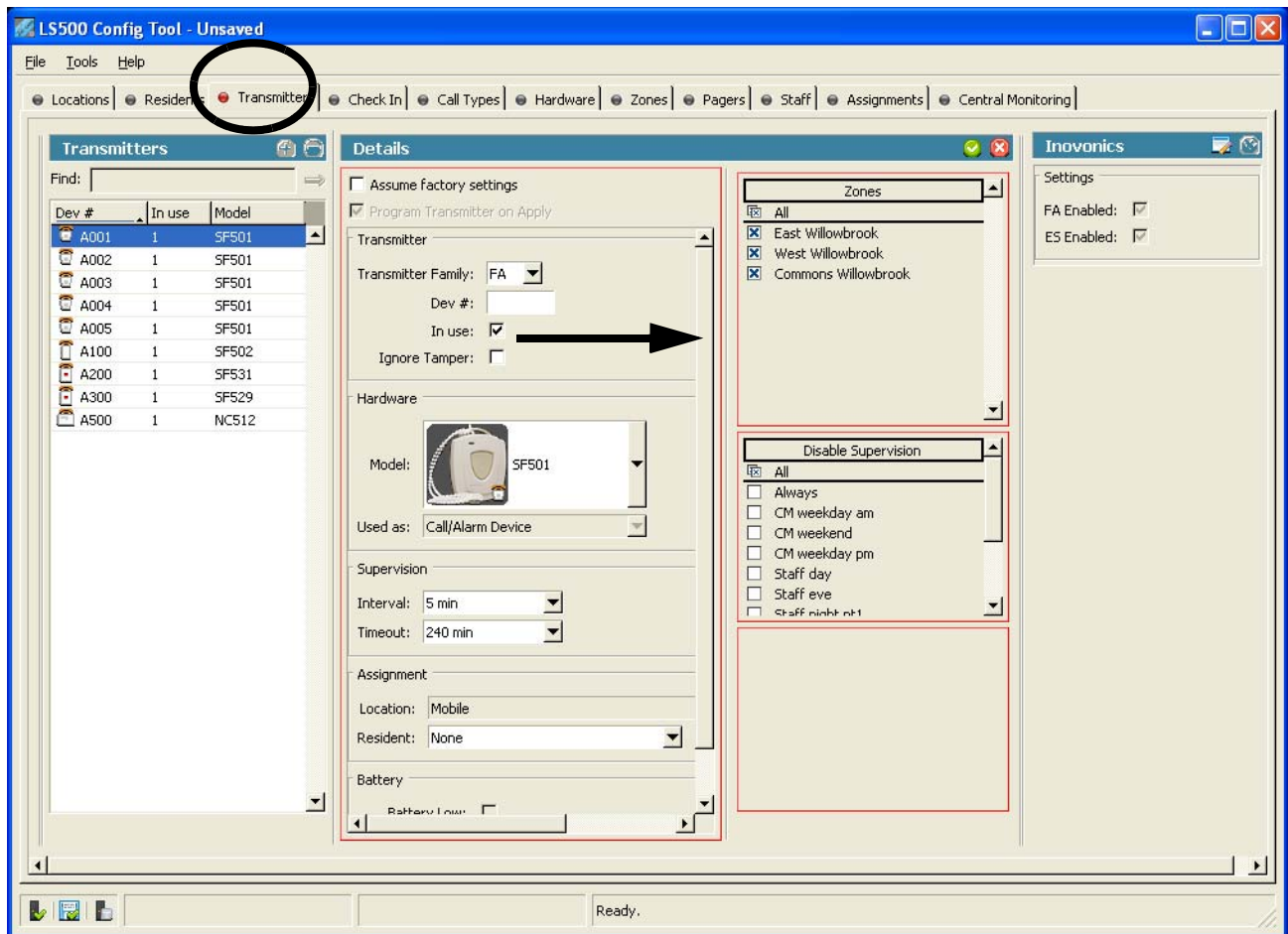
FIGURE 45. Example of Edit Indicators

Other Config Tool Icons

Three icons appear at the bottom left of the LS500 Config Tool window to provide system status information. The icons will change depending on whether or not the new data contained in the Config Tool matches the data that was previously committed to the system, whether or not you have saved your new configuration, and the location from which you chose to load your data. To see what each icon is indicating, allow your mouse to hover over the icon, then read the information as it pops up.

4   *System Setup, Hardware*

A Tek-CARE500 system can have hundreds of transmitters. It is often convenient to do the programming at the installing company's workshop rather than at the facility in which it will be installed. The instructions found here can be used for both temporary and final installation.

> **NOTE:**
>
> The NC501ES Master Station Computer must be dedicated to the Tek-CARE500 system. Do not run non-Tek-CARE500 applications on the master station computer. In addition, due to the critical nature of the Tek-CARE500 reporting features, all power saving features on the master station computer and monitor have been disabled.

> **NOTE:**
>
> When upgrading an NC501 or NC501A Master Station Computer to handle EchoStream equipment, complete the steps in ***Add ES Technology to an Existing NC501 or NC501A*** on page 52 before returning here to install the ES equipment.
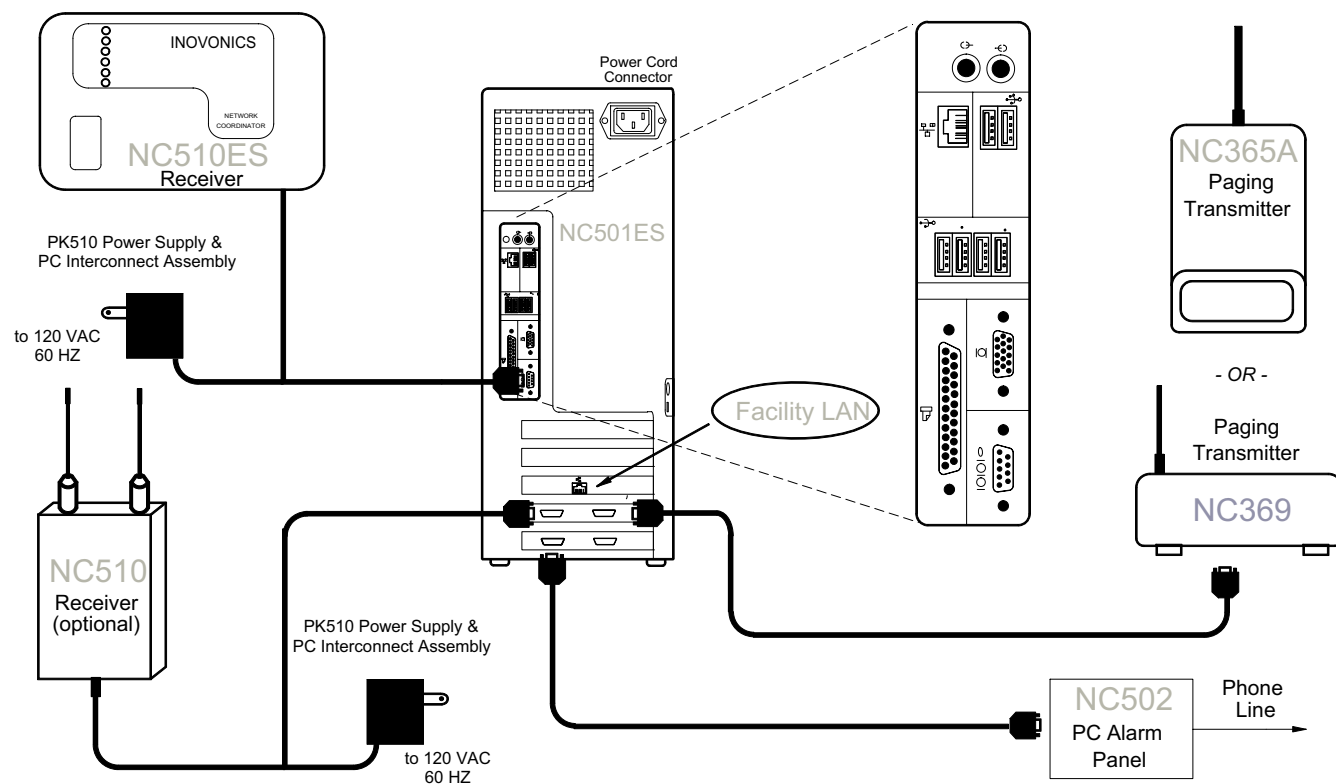
FIGURE 46. NC501ES Master Station Computer Connections

NC510

Serial Data Port

Vs | SER. IN
GND SER. OUT

Programming Header

Reset Button

Example: Inside SF502

Red

Green

To 120 VAC 60 Hz

PK510

To PC Comm. Port

Serial Data Port

Vs
GND
SER. OUT
SER. IN

NC510ES

Red

Green

Vs
GND
SER. OUT
SER. IN

TAMPER

To 120 VAC 60 Hz

PK510

To PC Comm. Port
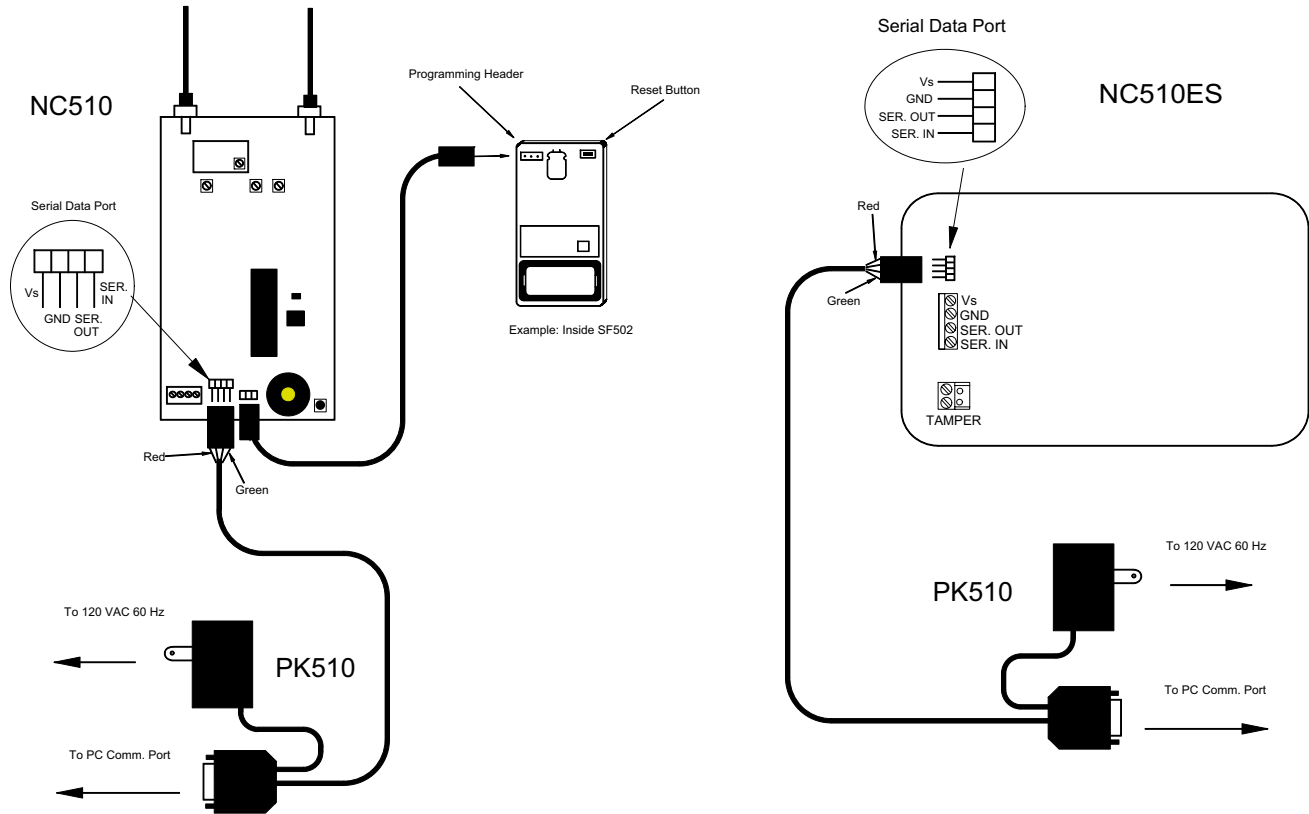
FIGURE 47. NC510 and NC510ES Connectors

Install the NC501ES Master Station Computer and NC510ES Receiver

1. Connect the monitor, keyboard and mouse to the NC501ES Master Station Computer's main connection panel.

2. Connect the NC510ES Receiver using the PK510 Power Supply and PC Interconnect Assembly to the serial port at the bottom of the NC501ES Master Station Computer's main connection panel.

3. A parallel or USB printer may also be connected to the master station computer (follow the manufacturer's directions for installation).

USB Ports for Mouse and Keyboard

VGA Monitor

Parallel Printer

NC510ES Receiver
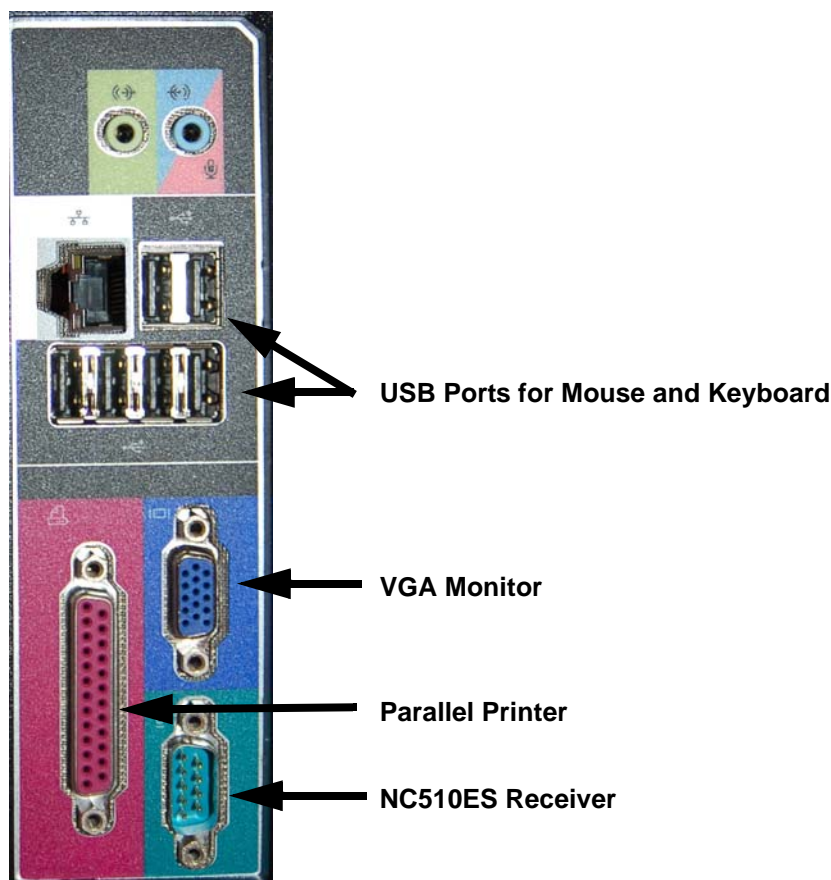
FIGURE 48. Connections to the NC501ES Master Station Computer's Main Connection Panel

The remaining connections are made using the Ethernet and serial ports, which are installed in the bottom three expansion slots at the back of the master station computer.

1. Facility LAN
2. NC510 (FA) Receiver
3. NC365A or NC369 Paging Transmitter
4. NC502 PC-Alarm Panel

FIGURE 49. Connections to the NC501ES Master Station Computer's Expansion Ports

4.   When the system includes pagers, connect the NC365A or NC369 Paging Transmitter to the NC501ES Master Station Computer's top right serial port.

5.   If the system includes Central Monitoring, connect the NC502 PC-Alarm Panel to the NC501ES Master Station Computer's bottom left serial port.

6.   Connect the NC501ES, NC510ES, and any other equipment that requires a 110V connection, to a power source using the PK250B UPS.

NOTE:

TekTone strongly recommends the use of the PK250B UPS. Use of the PK250B provides assurance that the system will remain operational in the event of a short term commercial power failure. It also acts as a buffer from power surges.

Use the LS500 Config Tool and the LS501 Event Monitor to customize the system, following the instructions in *System Setup, Programming Using the LS500 Config Tool* on page 61, and *System Setup, Programming Using the LS501 Event Monitor* on page 91.

Add ES Technology to an Existing NC501 or NC501A

The steps to follow when adding ES technology to an existing Tek-CARE500 are provided here.

NOTE:

As long as FA equipment remains in the system, an NC510 Receiver must remain connected to the master station computer. To add ES equipment to an existing system an NC510ES Receiver must also be connected. Both receivers run simultaneously.

Step 1: Upgrade the Master Station Computer

FA master station computers are made compatible with the new ES components by either replacing the master station computer or installing a software upgrade.

1.   Determine the release level of the existing master station computer.

The **NC501** Master Station Computer must be replaced by a new NC501ES. It is not compatible with the technology used by ES components.

The **NC501A** Master Station Computer requires a software upgrade. To purchase the upgrade, order part number LS501ES, or contact TekTone sales for more information.

2.   **To replace an NC501 Master Station Computer:**

All existing data must be re-entered. Data re-entry to the NC501ES can be completed manually, or a copy of the current NC501 database can be sent to TekTone for conversion. To have TekTone convert an NC501 database to the NC501ES software, contact TekTone sales and order part number LS501UP and a new NC501ES Master Station Computer.

To perform the LS501UP data conversion, TekTone requires copies of these files (found on the current NC501 Master Station Computer:

*   C:\Tek-CARE500\data\nc500.fdb
*   C:\Tek-CARE500\bin\cfg.xml
*   C:\Tek-CARE500\addons\Central Monitoring\DB.FDB (only exists if Central Monitoring has been configured)

Shut down the Event Monitor and, if applicable, the Central Monitoring software. Copy the files listed above to the desktop, then restart the NC501 software. E-mail the copied files to your TekTone Customer

---

Service Representative. Use "LS501UP Upgrade *facility name*" in the subject line. Be sure to provide contact information and purchase order number in the body of the e-mail.

Performing the upgrade in the sequence shown below will minimize the amount of time that the facility's Tek-CARE500 system is out of service.

- Attach the monitor, keyboard and mouse to the NC501ES Master Station Computer, see Figure 48 on page 50.
- Start the LS501 Event Monitor on the NC501ES.
- Reenter data.

  When TekTone has converted the NC501 database (using part number LS501UP), the database will be preinstalled on the new NC501ES Master Station Computer.

  When the NC501 database has not been converted by TekTone, enter data manually on the NC501ES following the steps for a new installation. The facility's existing FA transmitters do not require reprogramming; click on the **FA Traffic** button in the Event Monitor to find their Dev #'s.

- Disconnect the NC510 (FA) Receiver from the NC501 Master Station Computer, and connect it to the NC501ES Master Station Computer as shown in Figure 46.
- When the system includes a paging transmitter, disconnect it from the NC501 and connect it to the NC501ES as shown in Figure 41.
- Verify that the FA components of the Tek-CARE500 system are operating as expected. If any components must be reprogrammed, follow the instructions in ***Step 3: Reinstall the FA Equipment*** on page 55, and ***Step 4: Program the FA Transmitters*** on page 56, before proceeding.
- Go to ***Step 2: Install New ES Equipment.***

3. **To upgrade an NC501A Master Station Computer:**

NOTE:

Performing the upgrade in the sequence shown below will minimize the amount of time that the facility's Tek-CARE500 system is out of service. It also eliminates the need to re-program transmitters or re-enter data, such as resident information, locations and proximity maps.

- Obtain the LS501ES upgrade software and new license installation file from TekTone.
- Start the LS500 Config Tool on the NC501A Master Station Computer, and select **Load Configuration From System**.
- Open the **File** menu, select **Save Configuration As**, give the file a name and save it to the master station computer's desktop.
- Close the LS500 Config Tool and LS501 Event Monitor software.
- Insert the Tek-CARE500 LS501ES upgrade CD into the master station computer's disk drive.
- Follow the on-screen instructions to complete installation of the software upgrade.
- Run the new license installation file on the NC501A master Station Computer.
- Start the new **LS501 Event Monitor**.
- Start the new **LS500 Config Tool**. Select the **Open Configuration** option, browse to the file previously saved on the master station computer's desktop, and click **Open**.
- Click on the **Transmitters** tab to open the Config Tool Transmitters panel. Check the **FA Enabled** check box.
- Save the configuration with a new name. Then select **File > Commit Configuration to System** to send the changes to the Tek-CARE500 network. See *Save and Implement the Custom Configuration* on page 90 for more information.
- Verify that the FA components of the Tek-CARE500 system are operating as expected. If any components must be reprogrammed, follow the instructions in *Step 3: Reinstall the FA Equipment* and *Step 4: Program the FA Transmitters* before proceeding.
- Go to *Step 2: Install New ES Equipment.*

Step 2: Install New ES Equipment

- Ensure that the LS501 Event Monitor and the LS500 Config Tool are running on the NC501ES Master Station Computer.

> **NOTE:**
>
> To start the Config Tool after the software has been upgraded or the master station computer has been replaced, click on the Config Tool Icon, then choose **Load Configuration From System**.

- Connect the NC510ES Receiver as described in *Install the NC501ES Master Station Computer and NC510ES Receiver* on page 50.
- Click on the Transmitters tab to open the Config Tool Transmitters panel. Check the **ES Enabled** check box.
- Save the configuration. Then select **File > Commit Configuration to System** to send the changes to the Tek-CARE500 network. See *Save and Implement the Custom Configuration* on page 90 for more information.
- Complete the physical installation of ES devices using the instructions beginning with *Install the NC501ES Master Station Computer and NC510ES Receiver* on page 50. ES devices may use the Locations already created for FA devices.

Step 3: Reinstall the FA Equipment

Use these instructions when the upgraded master station computer does not recognize a previously installed FA device, or to add a previously installed FA device to the Tek-CARE500 system.

> **NOTE:**
>
> The process described here will be easier to follow when there are at least two installers (one at the remote device, one at the Event Monitor), and a means to communicate between them. An FA transmitter can be reinstalled without being removed from its installed location.

Follow the instructions beginning with *Transmitters* on page 70, with these differences:

- Verify that the **FA Enabled** check box is checked in the Config Tool Transmitters tab.
- Use the **FA Traffic** button at the top of the Event Monitor window to add transmitters.

- On the Event Monitor Transmitters Register, ensure that the Transmitter Family is **FA**.

FA and ES devices may be assigned to the same Locations.

Step 4: Program the FA Transmitters

Use this information during a service call, when an FA device must be replaced. An FA device that has not previously been installed in a Tek-CARE500 system must be reprogrammed during installation.

Each FA device must be physically attached to the NC510 Receiver to be reprogrammed. See Figure 50 on page 57 for connections between a transmitter and the NC510 Receiver.

Follow these steps to reprogram existing FA devices:

1. Locate the device and remove it from its installed location.

2. When the new device is not already labeled with its location information, label it so that it can be reinstalled in the same location.

3. Take the removed and labeled devices to the master station computer for reprogramming.

4. Open the NC510 Receiver so that its 3-pin programming header and reset button are accessible. Connect either end of the receiver's 12-inch programming cable to its 3-pin programming header, in either direction. The connector must cover all three pins on the programming header.

NC510

Programming Header

Reset Button

Serial Data Port

Vs

SER.
IN

GND SER.
OUT

Example: Inside SF502

Red

Green

To 120 VAC 60 Hz

PK510

To PC Comm. Port
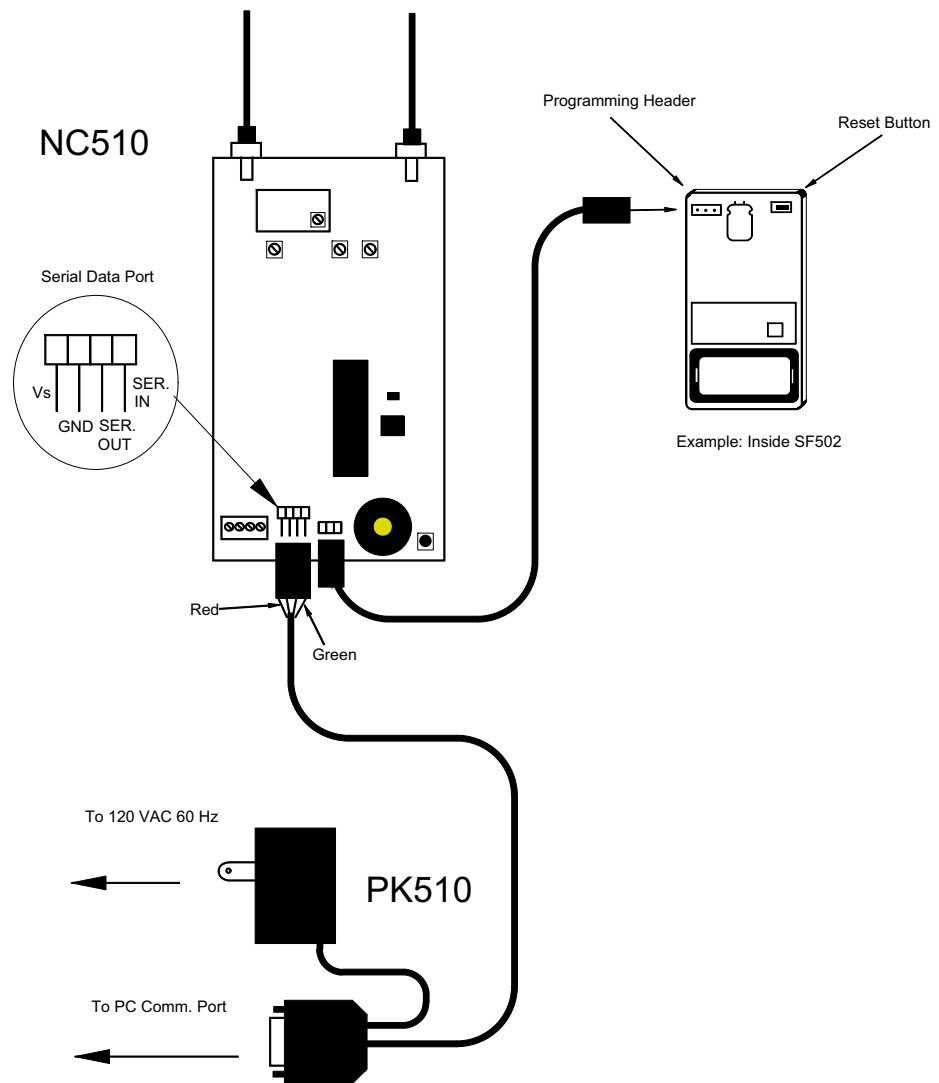
FIGURE 50. NC510 Programming Connections

5. Ensure that the master station computer and the LS501 Event Monitor software are running. Open the Config Tool software, select **Load Configuration From System**, and then select the **Transmitters** tab.
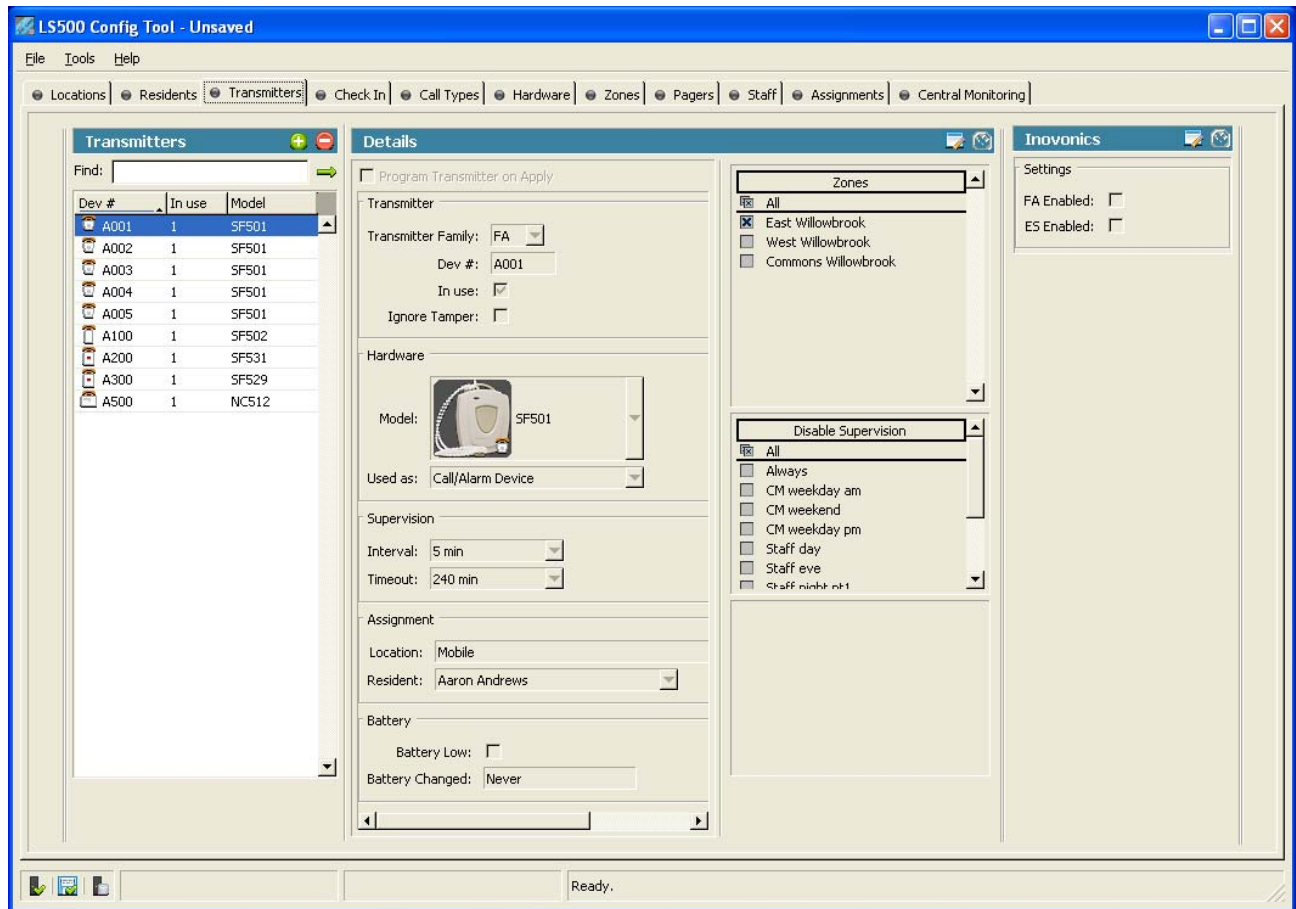
FIGURE 51. Config Tool Transmitters Tab

6. Open the device being reprogrammed so that its 3-pin programming header and reset button are accessible. (SF529/A and SF531/A stations have a connector on the programming header-note its orientation, and then remove it.) Connect the loose end of the receiver's programming cable to the 3-pin programming header of the device being reprogrammed, in either direction. The connector must cover all three pins on the programming header. For header locations, refer to the owner's manual included with the device.

7. Plug in the device to be programmed, and/or install its battery. For an SF530 Room Station, plug in a call cord.

8. Select the device to replace, then click the **Edit** (🖊) button in the Details panel.

9. Check **Program Transmitter on Apply**.

10. Click the **Apply** (✅) button.

11. Press the reset button on the transmitter, repeater or locator to complete programming.

When successful, a window will pop up with the message: The transmitter was successfully programmed. Click **OK**.

When this error message is displayed: "Programming Error: Unable to write new settings into receiver memory. Operation terminated," the receiver was busy handling supervision signals from the field. Click the **Program Transmitter** button to restart programming. (This error becomes more common as the number of programmed FA devices increases. To avoid this error, remove the batteries and/or power from all FA transmitters, repeaters and locators, except the one being programmed, until all FA devices have been programmed.)

12. Write the assigned device number (Dev #) on the back of the transmitter, repeater or locator.

13. Disconnect the programmed device from the receiver's programming cable. (For SF529/A and SF531/A stations, replace the connector on the programming header in its original orientation.)

14. Repeat Step 6 through Step 13 for each FA transmitter that needs reprogramming.

15. When all devices have been reprogrammed, remove the programming cable from the NC510 Receiver and close the receiver. Ensure that all batteries are inserted properly and close all of the reprogrammed devices.

16. Save the configuration, and then select **File > Commit Configuration to System** to send the changes to the Tek-CARE500 Network.

17. Reinstall the FA devices in their original locations.

5 *System Setup, Programming Using the LS500 Config Tool*

The Tek-CARE500 Wireless Emergency Call System with EchoStream Technology handles both FA and ES devices. FA devices are preprogrammed with four character Dev #'s that are not unique; therefore, FA devices must be connected to the NC510 Receiver and reprogrammed during installation. ES devices are preprogrammed with unique eight-character Dev #'s that are recognized by the Tek-CARE500. The newer ES parts have device numbers (Dev #) that have a longer character count (and a greater chance of data entry errors if manually entered); therefore, TekTone recommends using automatic entry of the Dev #'s.

Because it is possible to have both FA and ES devices running at the same facility, the Config Tool and Event Monitor have been upgraded to track traffic from both FA and ES transmitters simultaneously.

ES transmitters do not have to be physically connected to the NC510ES Receiver to be added to the Tek-CARE500 system. To streamline the installation process, add locations and resident information fields to the system before adding transmitters.

These steps outline the general procedure used to add locations and resident information fields:

1. Start the NC501ES Master Station Computer.

2. Copy the facility's proximity maps to the NC501ES Master Station Computer's hard drive. (This can be done before or after starting the LS500 Config Tool.) The copies can be placed in any directory on the hard drive. (A directory called *Proximity Maps* under the *My Document*s directory is an easy place to find them.)

    Proximity maps are image files of the building layout, in any of these formats: BMP, GIF, JPG, JPEG or PNG. The Tek-CARE500 scales all proximity maps to 500 pixels wide by 300 pixels high. When a layout is too complex to view at this size, break it up into several smaller sections (wings or floors, etc.).

3. Double-click the LS501 Event Monitor icon and wait until the Event Monitor window is open.
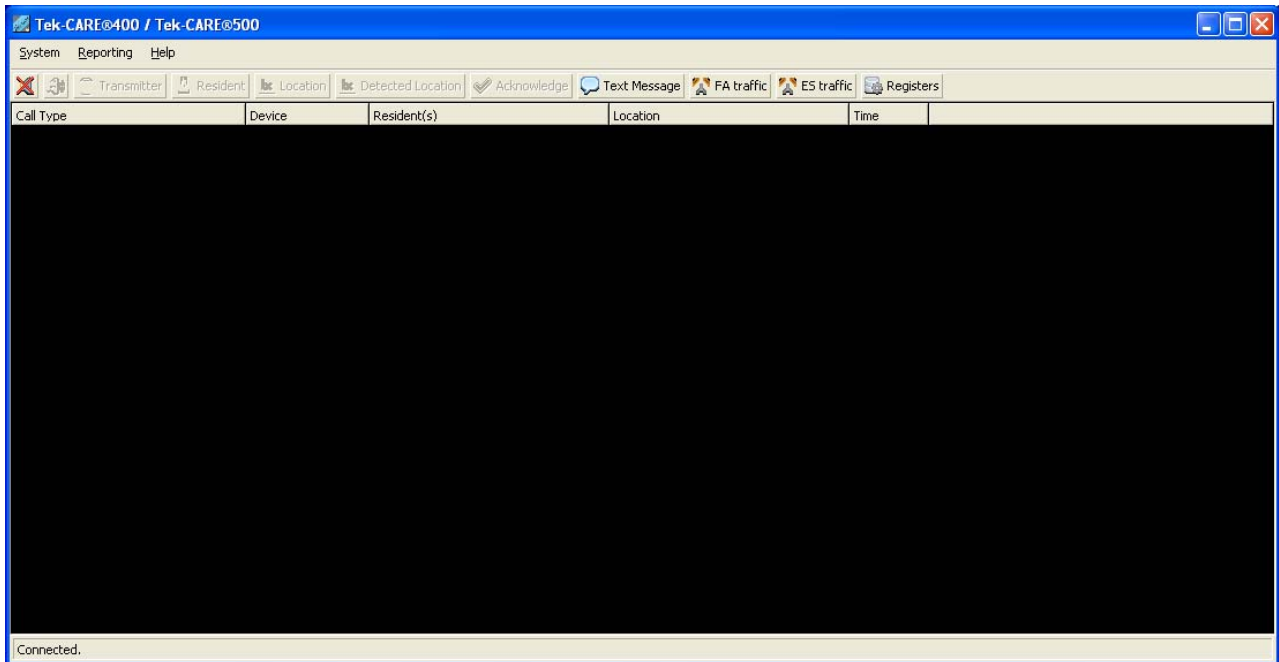
FIGURE 52. LS501 Event Monitor Icon and Window

4. Double-click the LS500 Config Tool icon.
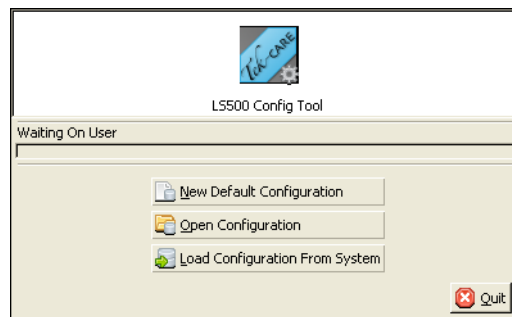
FIGURE 53. LS500 Config Tool Icon and Startup Window

5. Choose one of these options in the Config Tool's Startup Window:

- Choose **New Default Configuration** to load an empty configuration. Usually, this is used only when first starting to program a new system.
- Choose **Load Configuration From System** to load the data that the Event Monitor is currently using. This will include the data from a configuration previously committed to the Tek-CARE500 network, plus any changes made using the Event Monitor.
- Choose **Open Configuration** to load a previously saved configuration. This configuration can be located on the master station computer, or on removable media such as a USB drive or a CD-R disc.

Continue through the steps outlined in the rest of this chapter. By the end of this chapter, the following features will have been enabled using the LS500 Config Tool, in the same order as they appear on its Tab Bar:

- Locations
- Residents
- Enable Transmitters
- Check-in
- Call Types
- Hardware
- Zones
- Pagers
- Staff
- Assignments
- Central Monitoring

After the steps outlined in this chapter are completed, commit the changes to the Tek-CARE500 network, then use the LS501 Event Monitor to add transmitters.

Locations

Locations are places where repeater/locators and stationary transmitters have been physically installed. The Tek-CARE500 can use imported diagrams (Proximity Maps) of each wing or floor of the facility to show where each repeater/locator and stationary transmitter is installed.

Follow the instructions here to set up and define the locations in which transmitters will be placed.

Add Proximity Maps

1. Copy the facility's maps to the NC501ES Master Station Computer's hard drive.

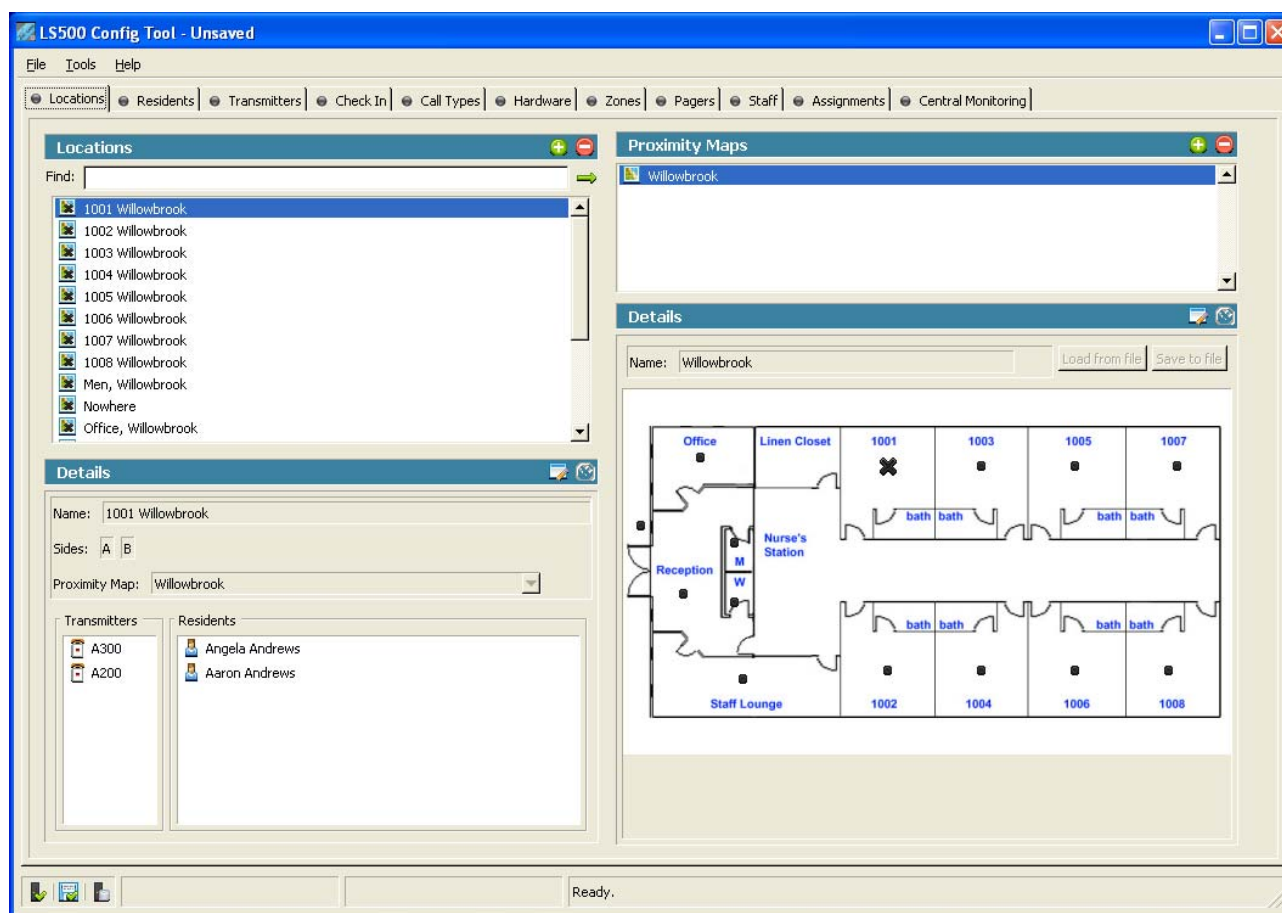**2.** Click the **Locations tab** in the LS500 Config Tool.

FIGURE 54. LS500 Config Tool Locations Panels

3. Click the **Add** ( ) button in the *Proximity Maps* panel.

4. Click the **Load from file** button in the *Proximity Maps – Details* panel, browse to a Proximity Map, and click the **Open** button.

5. Type a name for the map (such as Building 1, North Wing or 2nd Floor), and click the **Apply** ( ) button.

6. Repeat to add other facility maps.

Define Transmitter Locations

Describe each location in which a transmitter will be placed. Locations must be defined whether or not proximity maps are used.**To add locations when using proximity maps:**

1. Click the **Add** ( ) button in the *Locations* panel.

2. In the *Locations – Details* panel, type the name of the area in which a transmitter will be located, such as a resident room number.

3. Select the appropriate Proximity Map from the drop-down box in the *Locations – Details* panel, and click the **Apply** ( ) button. A black X will appear in the upper-left corner of the proximity map. This is a location indicator. Click the **Edit** ( ) button in the *Proximity Maps – Details* panel, then click and drag the **location indicator** (black X) to the map position that best represents that location, and click the **Apply** ( ) button in the *Proximity Maps – Details* panel.

4. Repeat steps 1 through 3 to add all locations, for all equipment on all proximity maps.

To add locations without proximity maps:

1. Click the **Add** ( ) button in the *Locations* panel.

2. In the *Locations – Details* panel, type a location name (such as a resident room number). Click the **Apply** ( ) button in the *Locations – Details* panel.

3. Repeat steps 1 and 2 to add all locations, for all equipment to be added.

When the equipment locations have been added, select **File > Save Configuration As** to save the programming changes. Record this file name; save this file often as the installation progresses to back up changes made to the configuration.

NOTE:

The changes are saved as a precaution. They are not automatically loaded to the Tek-CARE500 network. Permanent changes to the Tek-CARE500 network occur when Commit Changes is selected from the Config Tool's File menu. The Event Monitor uses the Tek-CARE500 network to monitor and display information.

NOTE:

TekTone strongly recommends backing up the saved configuration file on a CD-R disc or USB flash drive (not included) when all programming is complete.

Residents

Use the instructions in this section to set up resident information fields, to add resident information, and to assign residents to locations.

The information that can be stored is determined by a representative of the facility, and conforms to the privacy regulations in force for the facility.

The default resident information consists of a *Name* field. In addition to resident name and location, the Tek-CARE500 can be customized to store any other resident information the facility's representative requests, such as: address, physician name and phone, relative name and phone, or medical information. Custom fields required at the facility are set up during installation.

After these fields are set up, data can be entered during installation, or it can be added later by the facility's staff using the LS501 Event Monitor. Refer to **Add Residents and Assign Them to Locations** on page 94 for instructions on data entry. If entered during installation, the data must be provided by a representative of the facility.
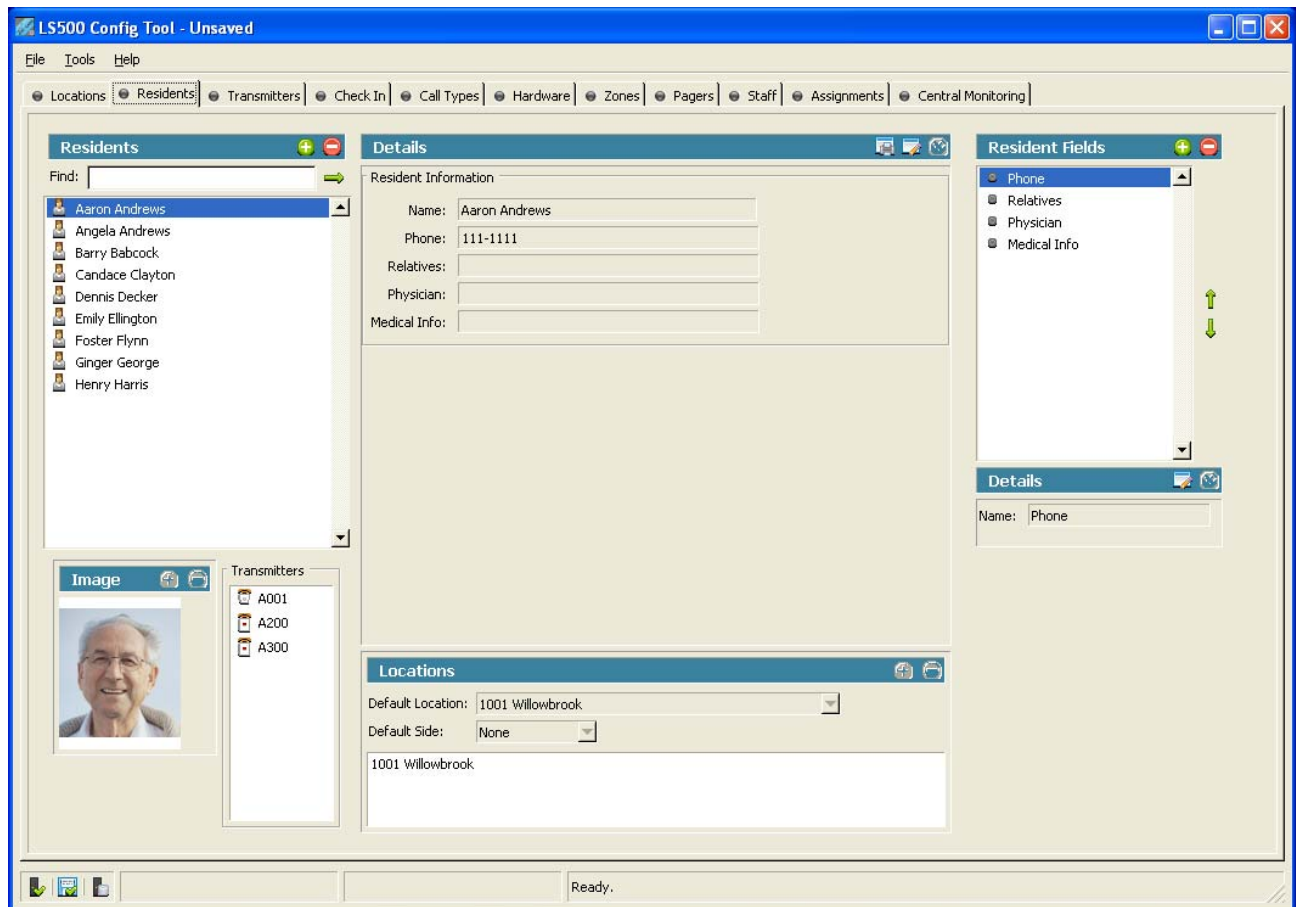

FIGURE 55. LS500 Config Tool Residents Panels

To add custom fields for additional resident information:

1.   Click the LS500 Config Tool **Residents** tab.

2.   Click the **Add** ( ) button in the *Resident Fields* panel.

3.   Type a name for the field in the *Resident Fields – Details* panel, then click the **Apply** ( ) button. Use only letters and numbers in the field name. Example field names include: Resident Phone, Physician, Physician Phone, Relative, Relative Phone, Medications, etc.

4.   Repeat Step 1 to Step 3 for each additional custom field.

> **NOTE:**
>
> Fields appear in the *Residents – Details* panel in the order in which they are entered. To change the sequence, click on a **field name** in the *Resident Fields* panel, and then click the **up and down arrows** at the right to move the field up or down on the list.

5.   When required, enter specific data for each of the facility's residents. Having the residents identified can make assigning some transmitters easier.

6.   Select **File > Save Configuration** to save the programming changes.

To add residents and assign them to locations:

Residents may be set up and assigned to locations now using the Config Tool, or later by facility staff using the Event Monitor.

Residents are the recipients of care at the facility, whether they are called residents, clients or patients. The Tek-CARE500 system associates individual residents with their respective rooms (locations) and transmitters, so it can show which resident has placed a call (activated his/her transmitter).

If a room has two residents, each of them can be assigned to the same location and stationary transmitter. Both names will then be displayed on the Event Monitor when a call is placed from that transmitter.

Follow these steps to add Residents and assign them to Locations:

1.   Click the LS500 Config Tool Residents tab.

2.   Click the **Add** ( ) button in the Residents panel.

3.   Type the resident's name in the Name field of the Residents-Details panel. If desired, complete any custom resident information fields that were added in the previous section, such as Resident Phone or Physician. Use the Tab key to move from field to field. Press the keyboard Enter key to type additional lines of text within a field.

4.   To include a resident photo, click the **Add** (⊕) button in the Image panel, browse to an image file on the hard drive, and click the **Open** button. (Image files may be in any of these formats: BMP, GIF, JPG, JPEG or PNG.)

5.   To assign one or more locations to the resident, click the **Add** ⊕( ) button in the Locations panel. A window will pop up that lists the locations set up in the facility. Select the resident's location (room) from the list and click the **OK** button. (To select multiple locations, hold the Ctrl key down and click each location before clicking the **OK** button.) If desired, choose a default location from the drop-down box-this location will be displayed when a call is placed from the resident's pendant transmitter.

6.   Click the **Apply** (⊘) button in the Residents-Details panel.

7.   Click on the **Printable** (🖶) button to create a printable report of this resident's information.

8.   Repeat this procedure to add the next resident.

Transmitters

Use the information in this section to enable FA and/or ES Transmitters and other remote devices. Transmitters will be added later using the LS501 Event Monitor.

1.　　Click on the **Transmitters** tab to open the Config Tool Transmitters panel. Check the **ES Enabled** check box. (Do not check the FA Enabled check box unless there is existing FA equipment installed.)
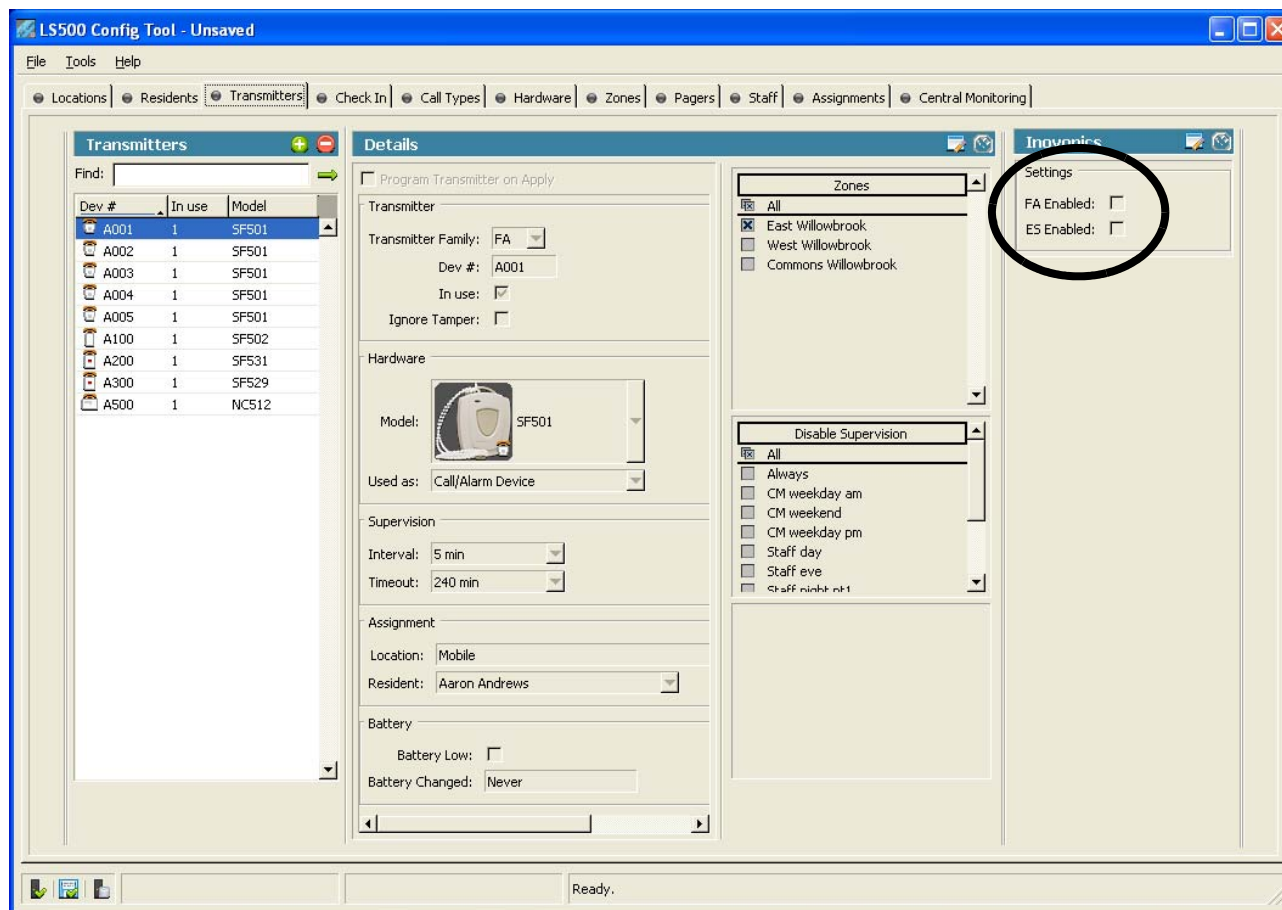
FIGURE 56. LS500 Config Tool: Select the Transmitter Family

2.　　Select **File > Save Configuration** to save the programming changes.

Check In

Use the information in this section to create resident check-in times.

A check-in time is a time period during which the system requires residents to press their rooms' check-in buttons or to activate their rooms' motion detectors. (Use SF502ES Wall-Mounted Call Transmitters, SF529ES Wireless Check-In/Assistance Stations, or SF515ES Passive Infra-Red Motion Detectors.) If the check-in button is not pressed (or the motion detector is not activated) during the scheduled time period, an *Inactivity* call appears in the LS501 Event Monitor.

NOTE:

Because resident check-in times are typically used by the facility's staff to determine if a resident may require assistance, set up the check-in times to coincide with times the resident is likely to be awake, and convenient times for the staff (avoid setting check-in times during shift changes). Gather this information prior to programming the call stations.

Create several check-in times so that each resident can be assigned a check-in time that coincides with their normal waking schedule. Residents can also be assigned one check-in time for weekdays and another for weekends. Here are some sample check-in times:

TABLE 6. Check In Times

Start Time	End Time	Week Days
05:00	06:30	SMTWTFS
06:00	07:30	SMTWTFS
06:30	08:00	SMTWTFS
05:00	08:00	.MTWTF.
05:00	09:00	S.....S

NOTE:

Check-In times do not have to be in one hour increments; when the facility's staff chooses to tell residents to check-in by a specific time, for example, by 11A.M., a range of time with an early morning start and an 11A.M. end time can be set up.
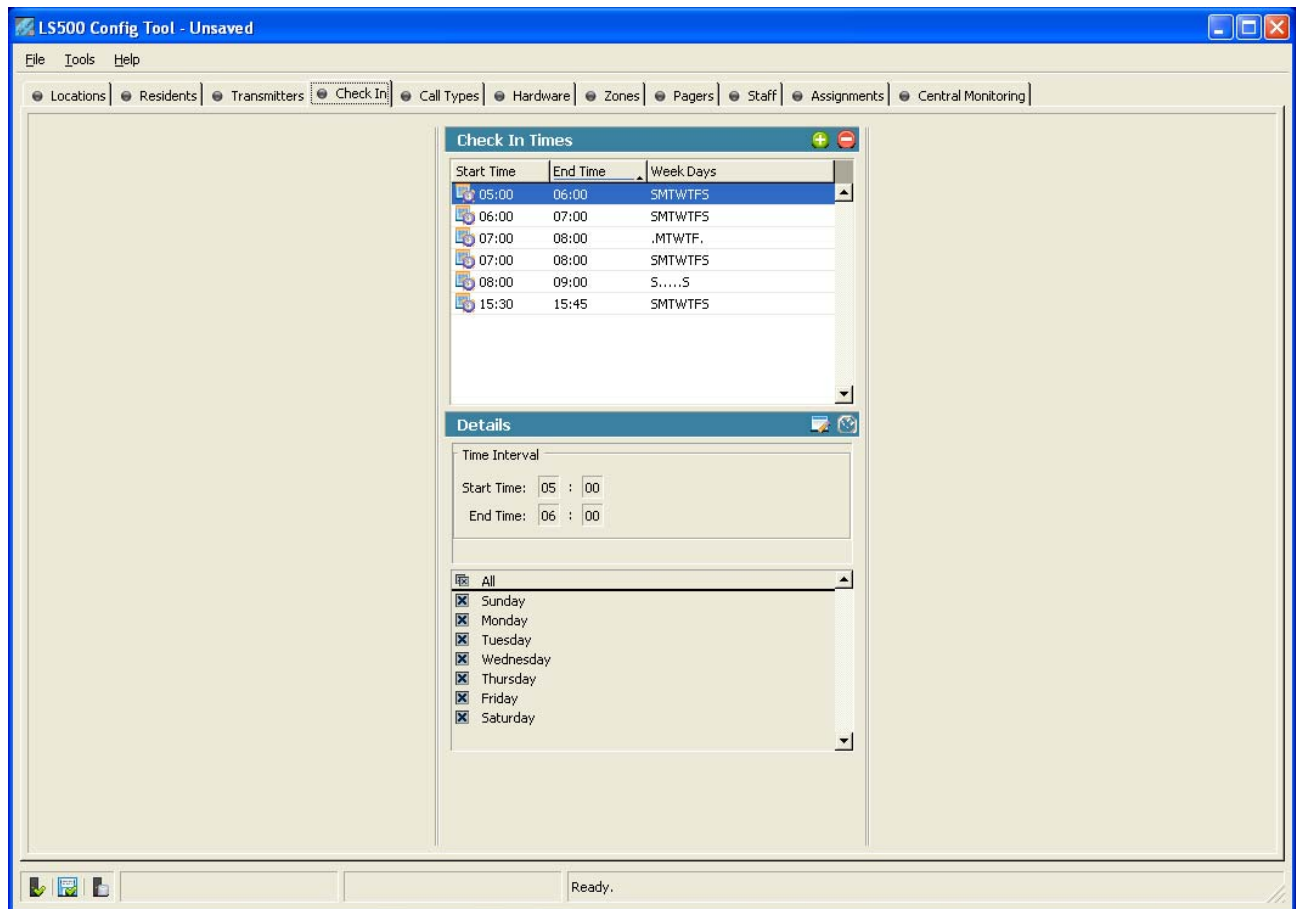
FIGURE 57. LS500 Config Tool Set Up Resident Check In Times

Check in times are set up using the Check In tab on the LS500 Config Tool, and activated in the Event Monitor. Click the **Check In** tab, then follow these steps to create check in times:

1. Click the **Add** (⊕) button in the *Check In Times* panel.

2. Using 24-hour Military time, enter a Start Time and an End Time in the *Details* panel. (Midnight is 00:00.) Start and End times must be at least 10 minutes apart.

3. Use the check boxes to select which days of the week this event is scheduled.

4. Click the **Apply** (⊘) button.

5. Repeat to add additional check in times.

6. Select **File > Save Configuration** to save the programming changes.

Call Types and Hardware

Use the information in this section to configure the call types and hardware types for the facility.

These settings do not normally need modification as the default settings are most often correct. Call TekTone support for help making changes to this information.

The LS500 Config Tool's *Call Types* tab is used to change call-type specific behaviors, such as priority and tones. It can be used to create new call types, such as "Door Open" or "Window Open," for use with SF520ES, SF525ES, or SF525/2ES transmitters. The system default call filters (All Calls, High Priority Calls, No Calls, and Only Code) can be modified, or new call filters for use with staff and pager assignments can be added.
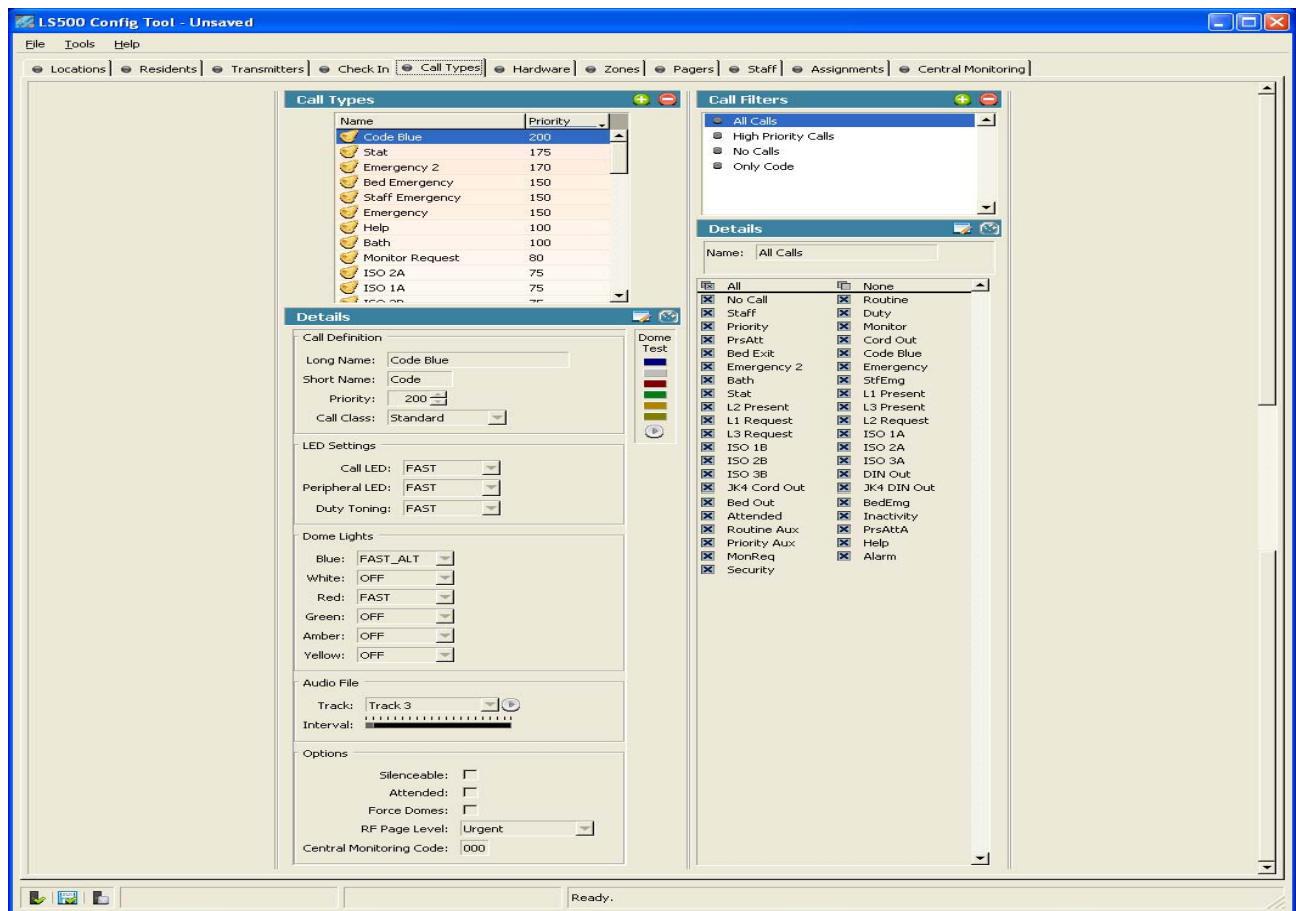
FIGURE 58. LS500 Config Tool Call Types Tab

The LS500 Config Tool's *Hardware* tab is used to change or add station-specific behaviors. For example, an SF502ES can be a Call/Alarm Device or a Check-In Device.

Use this tab to assign a Station Behavior to the NC-only input of SF525/2ES Universal Contact Transmitters. Otherwise, no call will be placed when the NC-only input is activated.

1.   Click the LS500 Config Tool **Hardware** tab.

2.   Click the SF525 (SF525) hardware type in the *Hardware Types* panel, and click one of the station behaviors in the Station Behaviors panel.

NOTE:

The data fields found on the Behavior Details panel change according to the selected Hardware Type. ONLY the behaviors for the selected hardware are available for you to edit.

---

3.   Click the **Edit** ( ) button in the Behavior Details panel to edit the selected station behavior.

4.   Select a call type for the NC-only input using either the *Input 2* or the *Acknowledged Input 2* drop-down box. (Unacknowledged *Input 2* calls are automatically reset when returned to a normal state. *Acknowledged Input 2* calls are reset at the NC501ES Master Station Computer.)

5.   Click the **Apply** ( ) button.

6. Select **File > Save Configuration** to save the programming changes.
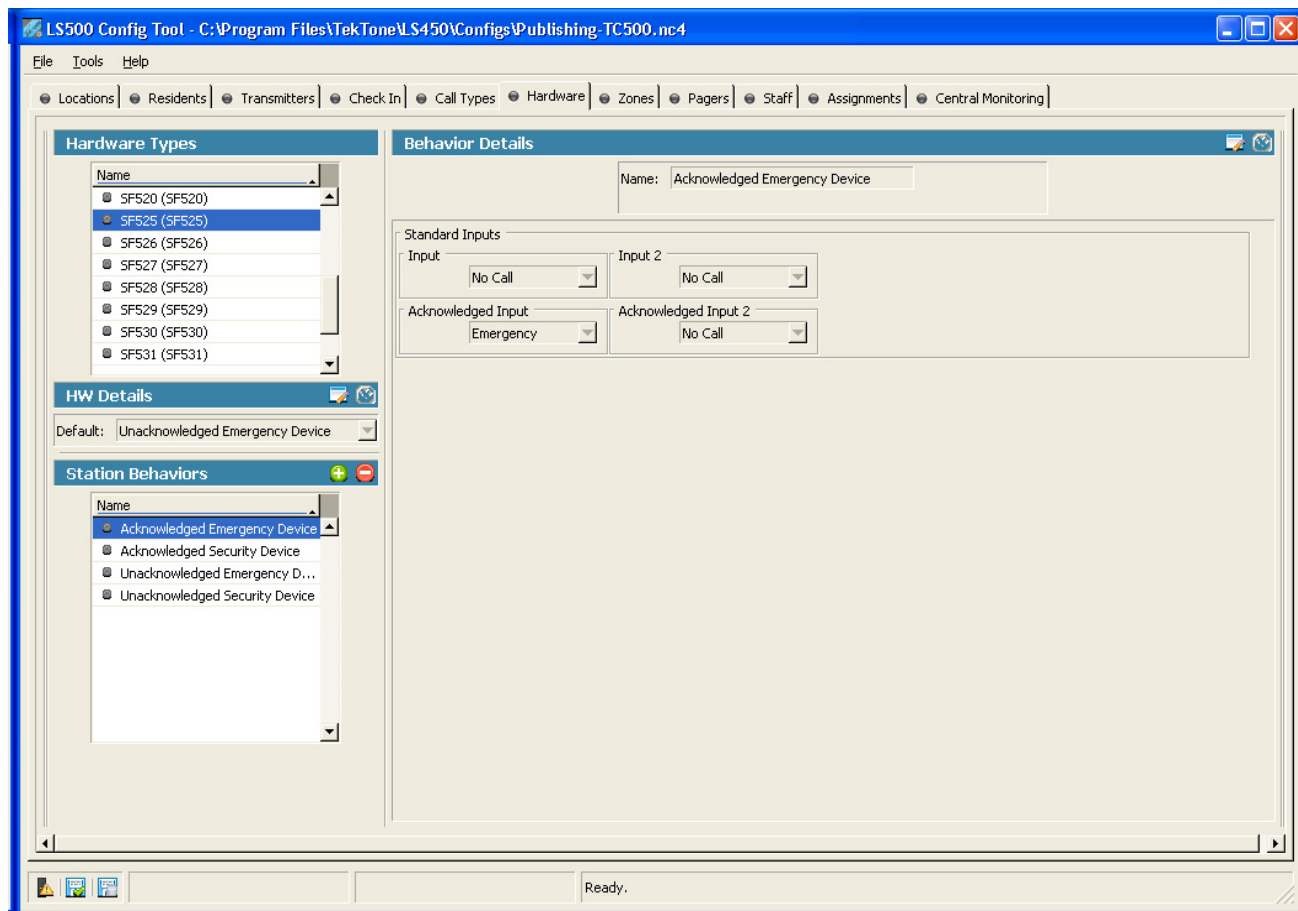
FIGURE 59. LS500 Config Tool Hardware Tab

Zones

Use the information in this section to set up zones. Transmitters will be assigned to zones later using the Event Monitor, see ***Assign Transmitters to Zones*** on page 102.

Zones are used to assign a group of transmitters to send automatic text messages to the pagers of selected staff or staff groups. They are also used as filtering criteria for the Tek-CARE500 Reporting System. Define a zone as a geographical area of the facility, and then assign transmitters to the zone.

The system has 75 preset zones, named Z01 through Z75. Each of these zones is preconfigured to include all transmitters. Preset zones may be renamed or deleted, and new zones can be created. (When zones are created, they do not include any transmitters until they are added using the Transmitters tab.)

> **NOTE:**
>
> Transmitters are not stations, and will not appear on the Zones tab's Stations list. View transmitter zone assignments on the Transmitters tab.

In the LS500 Config Tool software, click on the **Zones** tab.
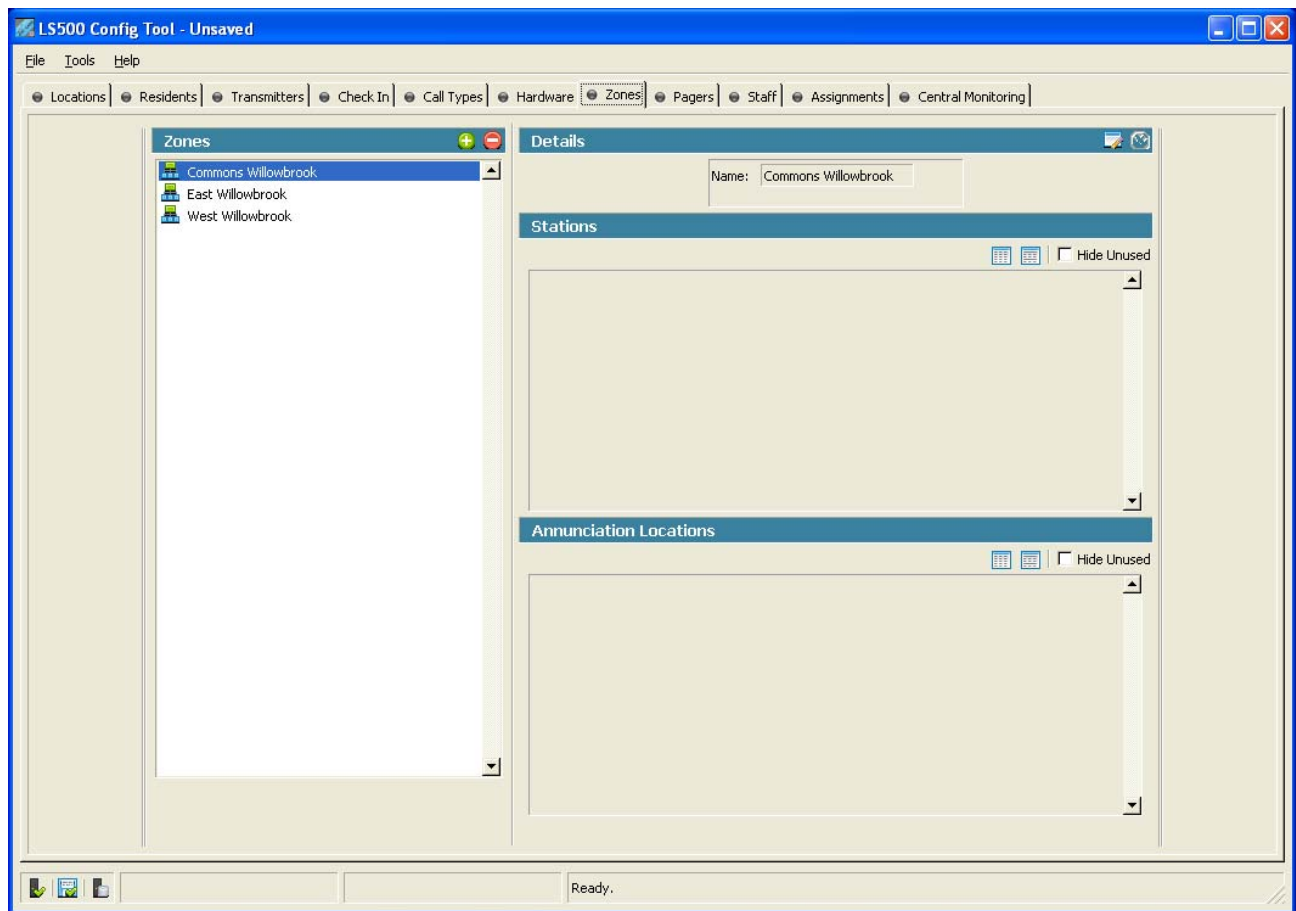
FIGURE 60. LS500 Config Tool Zones Tab

Rename, Delete and Add Zones

Rename preset zones to names that have meaning for the facility's staff. Click on the zone in the zones list and then click on the **Edit** ( ) button in the Details area. Type a new name and click on the **Apply** ( ) button. This renamed zone will include all transmitters unless they are removed using the Transmitters tab.

To delete zones:

Click on the zone in the zones list and then click on the **Delete** ( ) button.

To add zones:

Click on the **Add** ( ) button, type a name in the Details area, and then click on the **Apply** ( ) button. This new zone will not include any transmitters unless they are added using the Transmitters tab, after transmitters are added, as described in *Assign Transmitters to Zones* on page 102.

Pagers

Use the information in this section to enable or disable paging and pagers.

When the system does NOT include paging ensure that the *Enabled* check box in the RF Paging Settings panel is NOT checked. When a non-existent paging system is enabled, faults will be displayed on the Event Monitor.

Skip the rest of this section if the system does not include pagers.

NOTE:

NC397A (Scope) pagers are programmed with unique identifying CAP codes at the factory and those CAP codes are printed on the back of the pager. The CAP code is not changeable on-site. NC399P (CommTech) pagers are programmable on-site; refer to the NC399P documentation for instructions.

Paging is enabled and Pagers are added on the panels produced when the LS500 Config Tool **Pagers tab** is selected.
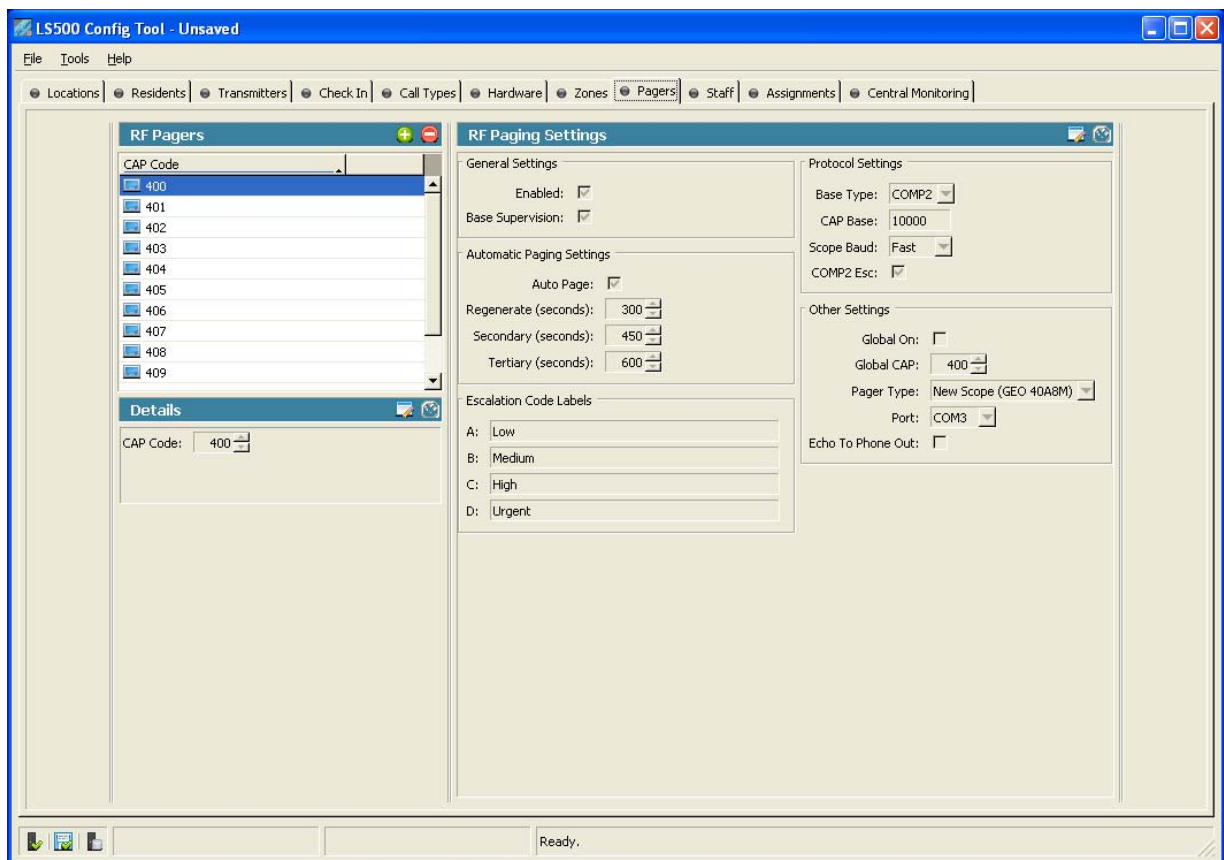
FIGURE 61. LS500 Config Tool Pagers Tab

Enable Paging

1. Click the **Edit** ( ) button in the *RF Paging Settings* panel.

2. Check the box next to *Enabled:.*

3. For TekTone NC365/A/AT and NC369 Paging Transmitters, select these protocol settings:

Base Type = Scope
CAP base = 10000
Scope Baud = Fast for 1200 baud pagers
Normal for 512 baud pagers

4. Click the **Apply** ( ) button.

Add Pagers

1. Click the **Add** ( ) button in the *RF Pagers* panel.

2. Type a pager's CAP code in the *Details* panel and click the **Apply** ( ) button.

3. Repeat for each pager.

Staff

Use the information in this section to add the staff members who will receive text messages on pagers, and to add custom text messages. (Skip this section if the facility's Tek-CARE500 system does not include pagers.)

Add Staff Members

Staff members may be added now using the Config Tool, or later by facility staff using the Event Monitor. In this step, add staff members to the system and assign them individual pagers.
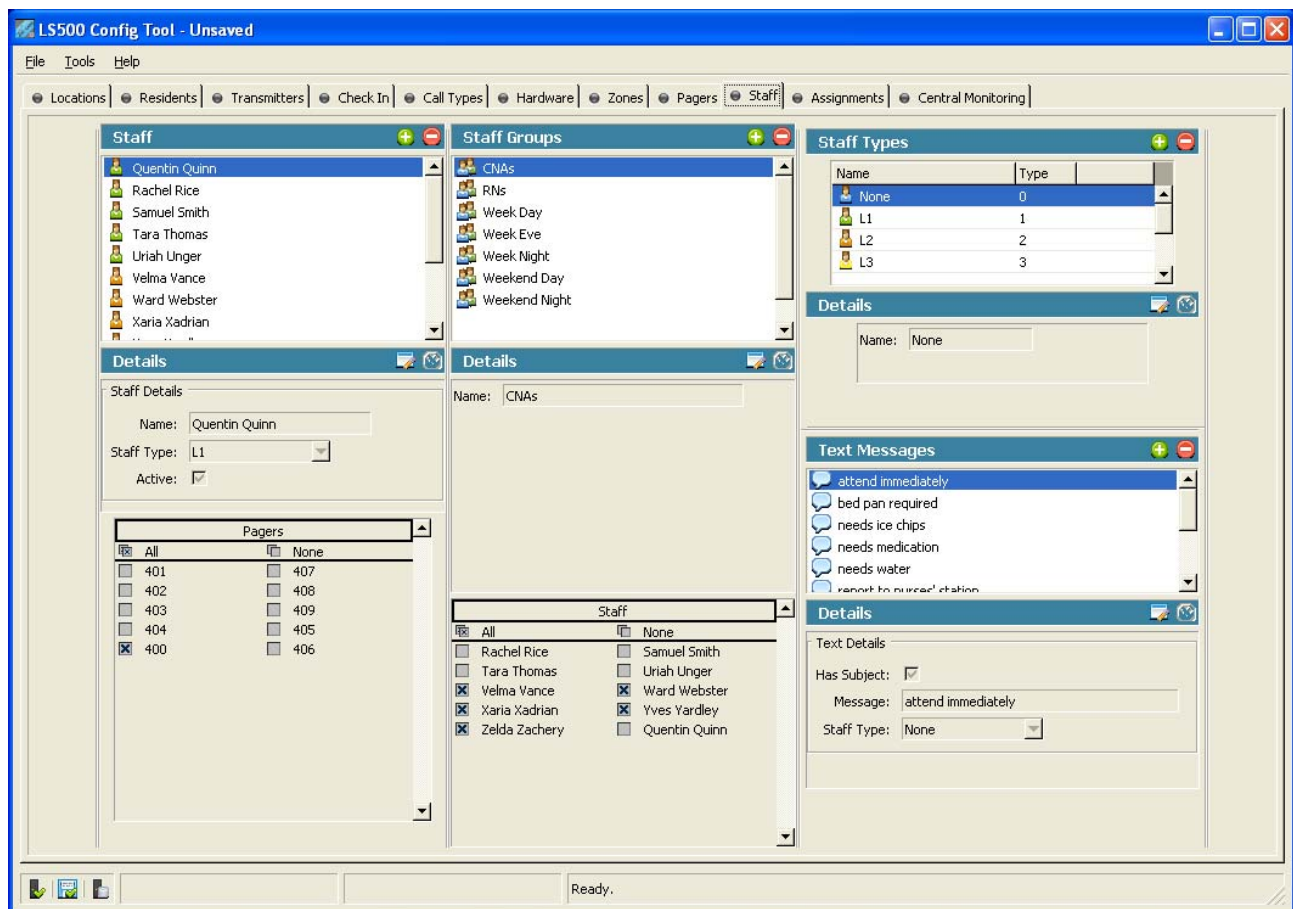
FIGURE 62. LS500 Config Tool Staff Tab

1. Click the LS500 Config Tool *Staff* tab.

2. Click the **Add** (🟢) button in the *Staff* panel.

3. Type a name for the staff member in the *Name* field. For example, this name can be a person, a wing, a zone in the facility, or a pager CAP code. If desired, assign a staff type (L1, L2, L3) or leave the default "None." Check the **Active** check box.

4. Select a pager to assign to this staff member, and click the **Apply** ⊘)
    button.

5. Repeat this procedure to add each staff member.

Create Staff Groups

(Skip this step if the facility's Tek-CARE500 system does not include pagers.)
Staff Groups may be added now using the Config Tool, or later by facility staff
using the Event Monitor. A staff group is a group of staff members that have
similar characteristics, for example, they work the same shift, cover the same
zone, are all nurses, or are all aides. A staff member can be added to multiple
staff groups.

Staff groups are used to send custom text messages to the pagers of a
specific group of staff members. They may also be used to create
assignments for automatic text messages.

1. Click the LS500 Config Tool *Staff* tab.

2. Click on the **Add** (⊕) button in the *Staff Groups* panel, and type a
    name for the group.

3. Select one or more staff members to add to the group and click on the
    Apply (⊘) button.

4. Repeat this procedure to add another staff group.

Add Custom Text Messages

The system includes several standard text messages that can be sent to
pagers. Custom text messages can also be added.

Custom text messages are added using the Text Messages and Details panels
on the LS500 Config Tool Staff window. The messages to add are provided by
the facility's staff.

1. Click the **Add** (⊕) button in the *Text Messages* panel.

2. Type a custom message in the *Details* panel.

3. Check the *Has Subject* box to automatically include the calling location
    with the message.

4. Select **L1**, **L2** or **L3 staff type** to send this message to just one staff
    type; select **None** to send this message to all staff types. (Staff types
    are defined by the facility's staff.)

5. Click the **Apply** (⊘) button.

6. Repeat for each custom text message.

7. Select **File > Save Configuration** to save the programming changes.

Change or Delete Pre-Programmed Messages

The system includes the pre-programmed messages listed below. They may be changed to fit the requirements at the facility. The messages are:

- Bed pan required
- Code Blue
- Needs medication
- Report to nurses' station
- Needs water
- Needs ice chips
- Attend immediately

To change pre-programmed messages:

1. Highlight an existing message in the *Text Messages* panel.

2. Click the **Edit** ( ) button in the *Details* panel.

3. Enter a new message in the *Details* panel.

4. Check the **Has Subject** box to automatically include the calling location with the message.

5. Select **L1**, **L2** or **L3 staff type** to send this message to just one staff type; select **None** to send this message to all staff types.

6. Click the **Apply** ( ) button.

7. Repeat for each custom text message.

8. Select **File > Save Configuration** to save the programming changes.

To delete pre-programmed messages:

1. Highlight the existing message in the *Text Messages* panel.

2. Click the **Delete** ( ) button in the *Text Messages* panel.

3. Repeat for each unnecessary message.

4. Select **File > Save Configuration** to save the programming changes.

Assignments

Use the information in this section to create shifts and staff assignments.

Create Shifts

Shifts are used to schedule time periods when Central Monitoring is enabled, when supervision of a transmitter is disabled, or when specific pagers annunciate calls. The time periods entered are defined by the facility's staff.
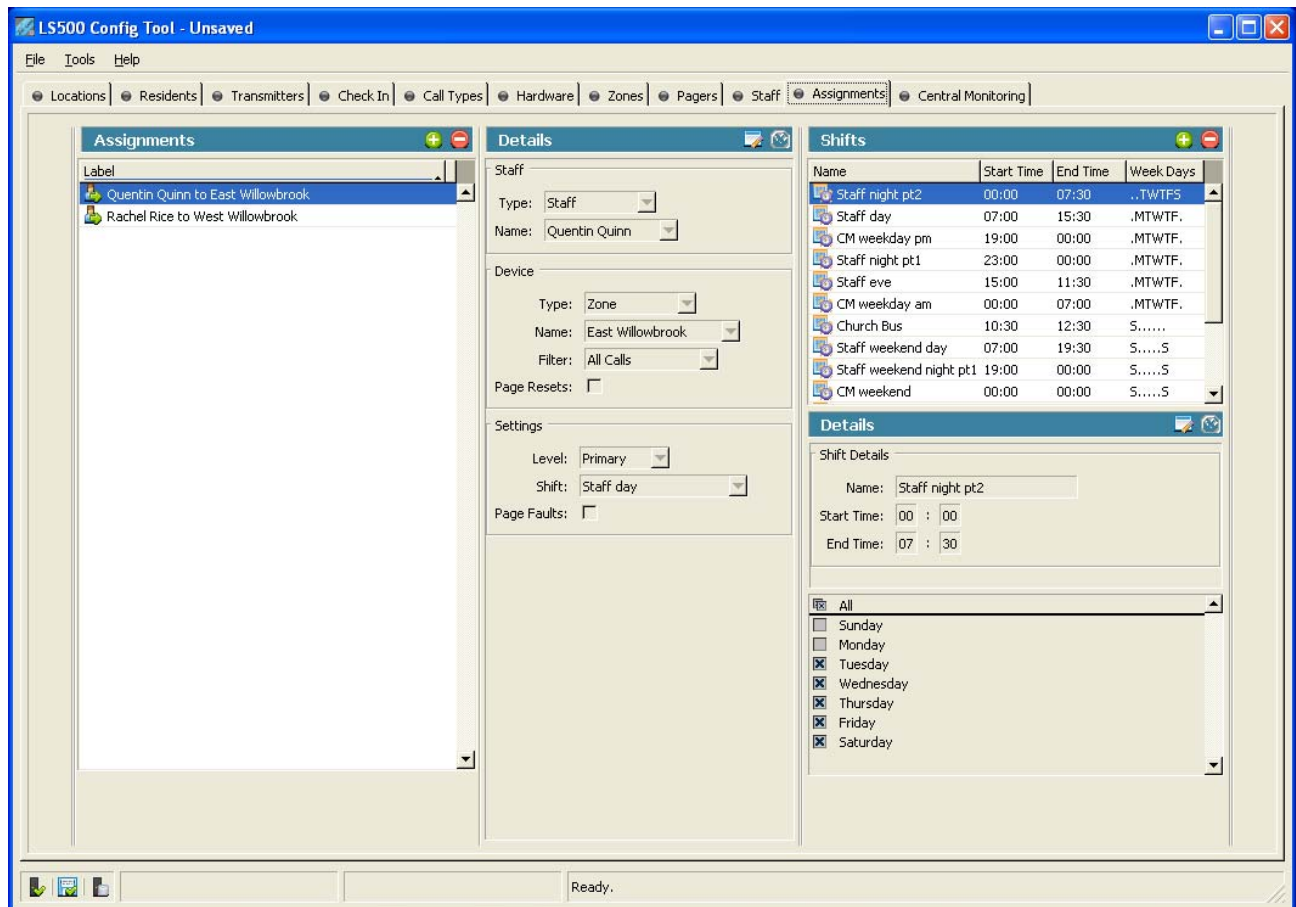
FIGURE 63. LS500 Config Tool Assignments Tab

Shift times are set up using the Assignments tab on the LS500 Config Tool. Click the **Assignments tab**, then follow these steps to create Shifts:

1. Click the **Add** (⊕) button in the *Shifts* panel.

2. In the *Shift Details* panel, type a name for the shift.

3. Using 24-hour Military time, enter a *Start Time* and an *End Time* in the *Shift Details* panel. (Midnight is 00:00.) Start and End times must be at least 10 minutes apart.

4. Use the check boxes to select which days of the week this event is scheduled.

5. Click the **Apply** (![icon]) button.

Create Assignments

(Skip this step if the facility's Tek-CARE500 system does not include pagers.) Assignments may be added now using the Config Tool, or later by facility staff using the Event Monitor.

The Tek-CARE500 system sends automatic text messages to pagers in response to calls from transmitters. Assignments are the final step in customizing the system to send automatic text messages to staff pagers.

Assignments are used to assign shifts to staff and staff groups, which determines when they will receive automatic text messages. Assignments are also used to assign transmitters and/or zones to staff and staff groups; this determines which transmitters will send them automatic text messages.

An assignment consists of three main parts: the staff members who will receive automatic text messages, the shift when they will receive them, and the transmitter or zone that they will receive them from.

1. Click the LS500 Config Tool *Assignments* tab.

2. Click on the **Add** (![icon]) button in the Assignments panel.

3. Choose the staff type (staff, group, or all staff) and staff name (the name of a staff member or a staff group).

4. Choose the level (primary, secondary, or tertiary) and the shift. Also choose whether to send pages for faults.

5. Choose the device type (a transmitter, zone, or all devices), the specific transmitter or zone, and the filter (all calls, no calls, only code, or high priority calls). Also choose whether to send a page when a call is reset.

6. Click on the **Apply** (![icon]) button.

7. Repeat procedure to create additional staff assignments.

Central Monitoring

Use the information in this section to enable Central Monitoring, and to create Central Monitoring Shifts.

When Central Monitoring is enabled, the Tek-CARE500 LS501 Event Monitor sends events (such as alarms, resets, and missing transmitters) via a serial connection to the NC502 PC-Alarm Panel (for connection information, see Figure 49. ***Connections to the NC501ES Master Station Computer's Expansion Ports***, on page 51). The NC502 PC-Alarm panel dials the Central Monitoring company's telephone number and transmits the events to the Central Monitoring company.

Create Central Monitoring Shifts

Follow the instructions in **Create Shifts** on page 83 to create the time periods when Central Monitoring is to be enabled. These shifts can be prefixed with *CM* to differentiate them from the shifts created for other purposes.

Enable Central Monitoring

After the Central Monitoring shift times are created, click the **Central Monitoring tab** in the LS500 Config Tool, and enable Central Monitoring.
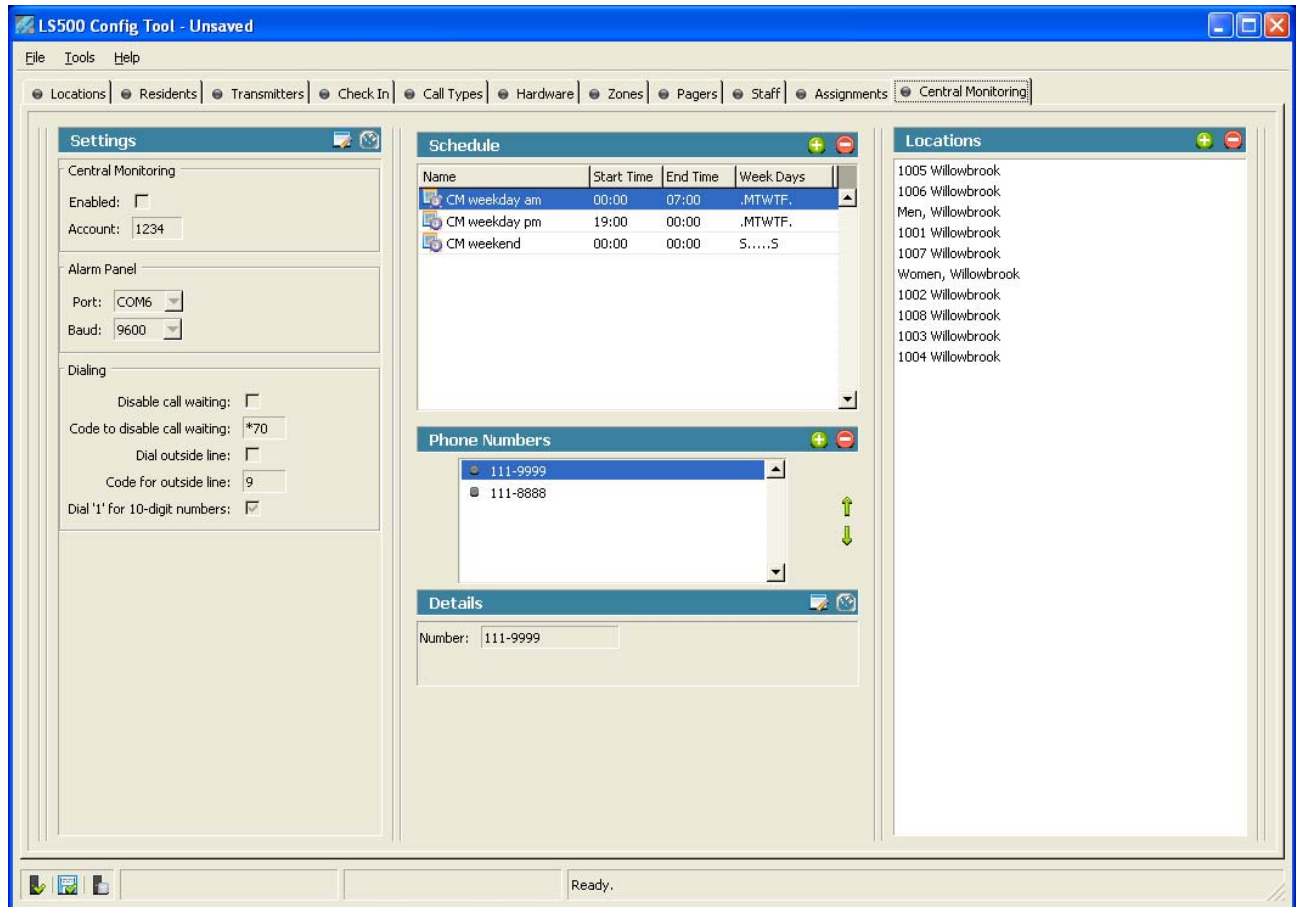
FIGURE 64. LS500 Config Tool Central Monitoring Tab

1.   Click the **Edit** (📝) button in the *Settings* panel and check the *Enabled:* box.

2.   Type the facility's 4-digit account code, as assigned by the Central Monitoring company, in the *Account:* box. (Valid characters are the numbers 0 through 9 and the letters B through F.) This 4-character code is sent with every event to the Central Monitoring company, and is used to identify the event's originating Tek-CARE500 facility.

3.   Configure dialing options, as needed, to disable call waiting, to use a prefix to dial an outside line, or to dial *1* for 10-digit numbers.

4.   Click the **Apply** (✓) button to save the new settings.

Select Active Central Monitoring Times

1. Click the **Add** (⊕) button in the *Schedule* panel.

2. A window will pop up that lists the previously created shifts, plus an *Always* shift. Select a shift during which Central Monitoring is to be active and click the **OK** button.

3. Repeat to add another shift to the list.

Create the Central Monitoring Company's Phone Number List

When sending an event, the LS501 Event Monitor tries each telephone number in order, and uses the first one that connects. If that telephone number stops working, the Event Monitor continues through the list until it finds another working number, retrying once per minute until it connects.

1. Click the **Add** (⊕) button in the *Phone Numbers* panel. Type the Central Monitoring company's telephone number and click the **Apply** (⊘) button. Repeat to add another phone number to the list.

2. To change the phone number sequence, click on a **phone number** and then click the **up** and **down arrows** at the right to move the phone number up or down in the list.

Create the List of Locations to be Monitored

If a location is not in the *Locations* list, events from that location will not be transmitted to the Central Monitoring company.

1. Click the **Add** (⊕) button in the *Locations* panel.

2. A window will pop up that lists the locations in the facility. Select the locations (rooms) to monitor from the list and click the **OK** button. (To select multiple locations, hold the *Ctrl* key down and click **each location** before clicking the **OK** button.)
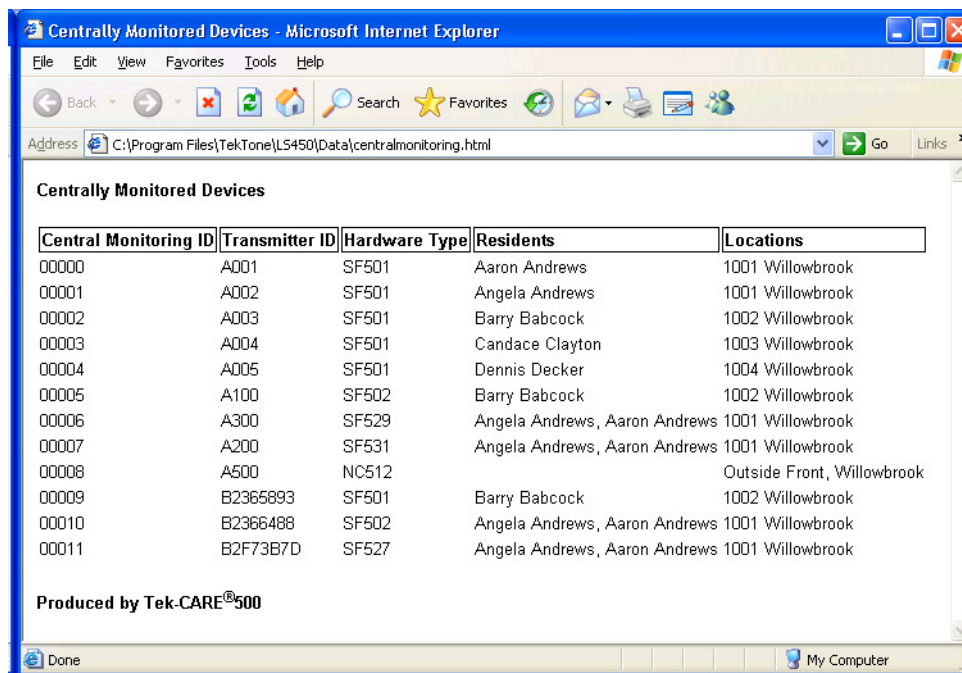
Check the settings

To ensure that Central Monitoring will work properly, check the settings. Make sure that the:

- baud rates match
- schedule is enabled
- locations to monitor are set up

Print the Central Monitoring Device List

The Central Monitoring Device List is used by the Central Monitoring company to match the ID that is transmitted with an event to a resident's name and location (Figure 65).

FIGURE 65. Central Monitoring Device List

To create the device list:

1. Click the Tools menu at the top of the LS500 Config Tool and then select **Central Monitoring Device List**.

2. In the window that pops up, select which options to include: Show Residents, Show Locations, Include Devices Not Currently Monitored, and Include Devices Not Currently in Use. Then click the **OK** button.

3. The device list will appear in a browser window. Print the list and provide it to the Central Monitoring company.

Password Protection

Use the information in this section to set up password protection.

When password protection is turned on, a password must be entered in the LS501 Event Monitor software before resident, transmitter, zone, staff, staff group or staff assignment information can be added, deleted or edited. Calls and reports remain fully functional.

The password manager is accessed from the LS500 Config Tool Menu bar. Follow these steps to add one or more passwords:

1. Select **Tools > Password Manager** to open the password manager.
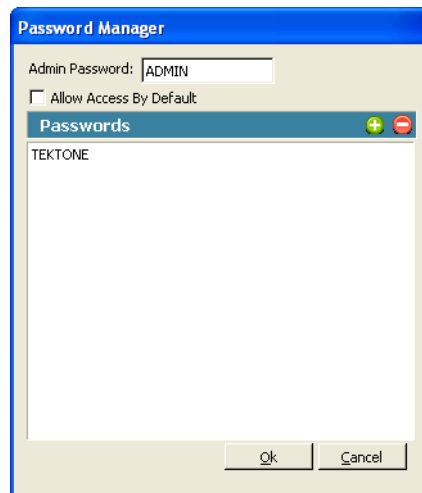
FIGURE 66. Password Manager

2. Click the **Add** ( ) button, type a password, and click the **OK** button. Repeat to add more passwords. (Passwords can contain letters and numbers and are not case sensitive. An Administrative password is required in order to create User passwords.)

3. Uncheck the **Allow Access By Default** box to require passwords.

4. Click the **OK** button to save the new passwords.

Save and Implement the Custom Configuration

The programming so far has been created offline using the LS500 Config Tool software. In this step, a copy of the custom configuration is saved on the hard drive of the NC501ES Master Station Computer, and the configuration is uploaded (Committed) to the Tek-CARE500 network for use by the LS501 Event Monitor software.

Save the Custom Configuration:

1. Select **File > Save Configuration** to save changes.

2. Select **File > Consistency Check** to run the consistency check.

3. Fix any issues, and then select **File > Save Configuration** to save changes.

Commit the Configuration to the Tek-CARE500 Network:

1. Select **File > Commit Changes** to update the Tek-CARE500 LS501 Event Monitor software with the customized programming.

2. Wait for the *Commit Successful* message to appear.

3. Shut down the LS500 Config Tool Software.

NOTE:

TekTone strongly recommends back up of the saved configuration file on a CD-R disc or USB flash drive (not included).

When setup information has been saved to a file, but is not committed to the Tek-CARE500 network, the changes will not appear in the Event Monitor.

6 *System Setup, Programming Using the LS501 Event Monitor*

This chapter describes how to use the LS501 Event Monitor to program and customize the Tek-CARE500 for use at the facility.

NOTE:
Password protection is turned on or off via the LS500 Config Tool (See **Password Protection** on page 89). When password protection is turned on, a password must be entered in the LS501 Event Monitor software before information in the registers can be added, edited, or deleted. Calls and reports remain fully functional. After entering a valid password, all editing remains available until the registers are closed by clicking on the **Registers** tab.

Add Transmitters

Use the information in this section to add ES Transmitters and other remote devices.

1.   Ensure that the master station computer is running. If the LS501 Event Monitor is not running, double-click the **LS501 Event Monitor** icon on the desktop to start the Tek-CARE500 software. When it is connected (shown in the lower-left of the Event Monitor window), continue.

2.   Click on the **ES Traffic** button at the top of the Event Monitor window. The Traffic window will open. Select **Hide transmitters already in system** and **Hide supervisions** to make new equipment installation easier.
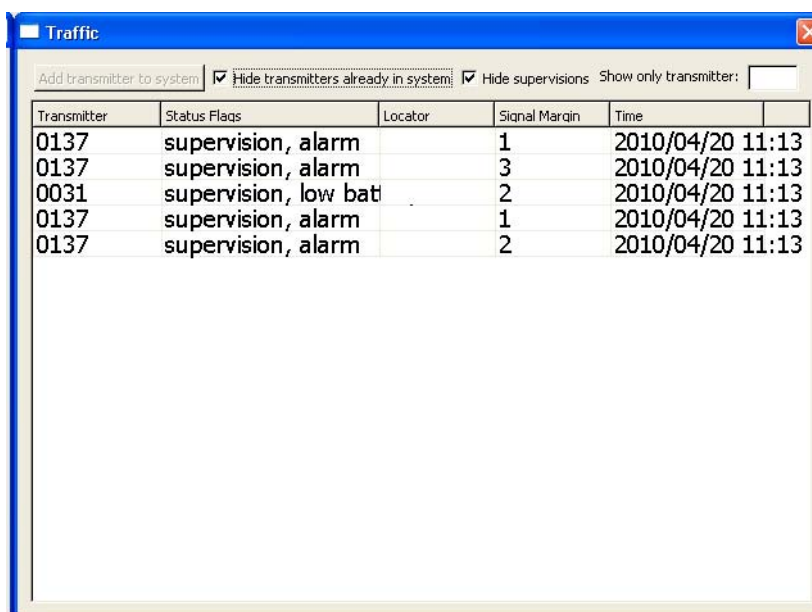
FIGURE 67. LS501 Event Monitor Traffic Window

3.   Ensure that the battery is installed in the transmitter, and activate an alarm, or press the transmitter's reset button. The traffic window will display the transmitter data.

NOTE:

ES transmitters use eight-digit alphanumeric Dev #'s, which are automatically entered by the Tek-CARE500 software. As each transmitter is identified, record where each transmitter is to be installed. Enter the identification number of each transmitter directly on site blueprints and on the equipment (or its packaging). Or, keep a written list of equipment and locations as part of this process. This information will be required when the transmitters are physically installed in their permanent locations.

---

4. Highlight the transmission information on the Traffic window, then click on the **Add transmitter to system** button. (The button will only be available when a previously unidentified transmitter is highlighted.) The Event Monitor Transmitters Register opens and the Dev # of the device appears in the window.

5. Ensure that:
   - The Transmitter Family is **ES,**
   - The **Dev #** has been captured, and
   - The **In Use** check box is checked.

6. Enable **Ignore Tampe**r if required.

7. Use the factory default Supervision settings; these settings will work for most applications. Before making any changes to Supervision settings, contact TekTone Technical Support at (800)327-8466.

8. Select the Hardware Model from the drop-down list. Hardware models have been defined at the factory. When the device can be used for more than one purpose, select that purpose from the list in the *Used as* drop-down list.

9. The locations entered previously will appear in a drop-down list in the Assignment panel. Choose the correct location. (All SF501ES pendants are assigned to *Mobile*.)

10. When residents have been entered, each pendant transmitter can be assigned to a resident. Or pendant transmitters can be assigned to residents later.

11. Record the Dev #, location and resident's name on the site blueprint or on a worksheet, for use during physical installation.

12. Click the **Apply** ( ) button on the Details button bar to save the information.

13. Repeat Step 2 through Step 12 for each transmitter in the system.

Add Residents and Assign Them to Locations

The installer can complete this step, or it can be completed by the facility staff after the system is physically installed.

Skip this step if all Residents have been added and assigned to locations using the Config Tool.

Residents are the recipients of care at your facility, whether you call them residents, clients or patients. The Tek-CARE500 system associates individual residents with their respective rooms (locations) and transmitters, so it can show which resident has placed a call (activated his/her transmitter).

If a room has two residents, each of them can be assigned to the same location and stationary transmitter. Both names will then be displayed on the Event Monitor when a call is placed from that transmitter.

In addition to resident name and location, the system may have been customized by your installer to store any other resident information you requested, such as address, physician name and phone, relative name and phone, or medical information.

1.   Start the LS501 Event Monitor software. If this program is not already running, double-click the **LS501 Event Monitor icon** on the desktop to start the Tek-CARE500 software. When it is connected (shown in the lower-left of the Event Monitor window), continue.

2.   In the LS501 Event Monitor, click on the *Residents* tab in the Registers.
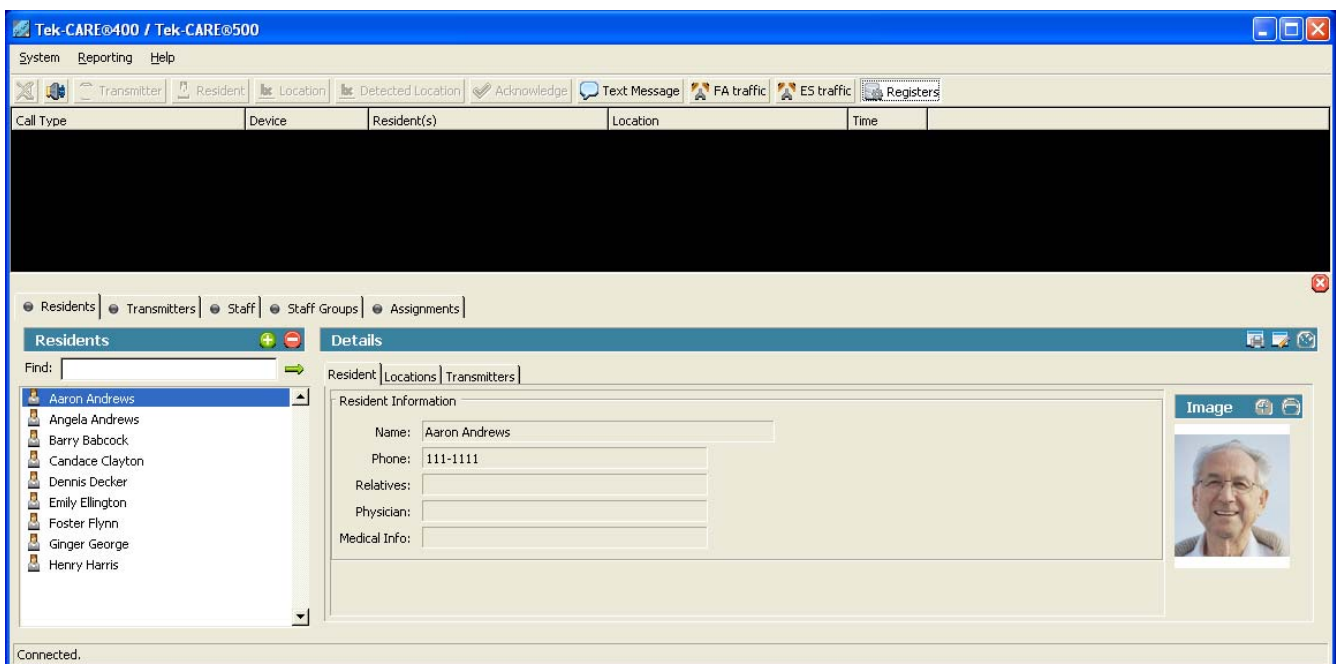
FIGURE 68. Add Resident Information

3.   Add Residents:

   •   Click on the **Resident** tab in the *Residents-Details* panel, and then click on the **Add** ( ) button.

   •   Type the resident's name in the Name field of the *Residents-Details* panel. If desired, complete any custom resident information fields that you added using the Config Tool, such as Resident Phone or Physician. Use the Tab key to move from field to field. Press the keyboard **Enter** key to type additional lines of text within a field.

   •   To include a resident photo, click on the **Add** ( ) button in the Image panel, browse to an image file on the hard drive, and click the **Open** button. (Image files may be in any of these formats: BMP, GIF, JPG, JPEG or PNG.)

   •   Click on the **Locations** tab in the Residents-Details panel, and then click on the **Add** ( ) button on the Locations tab.
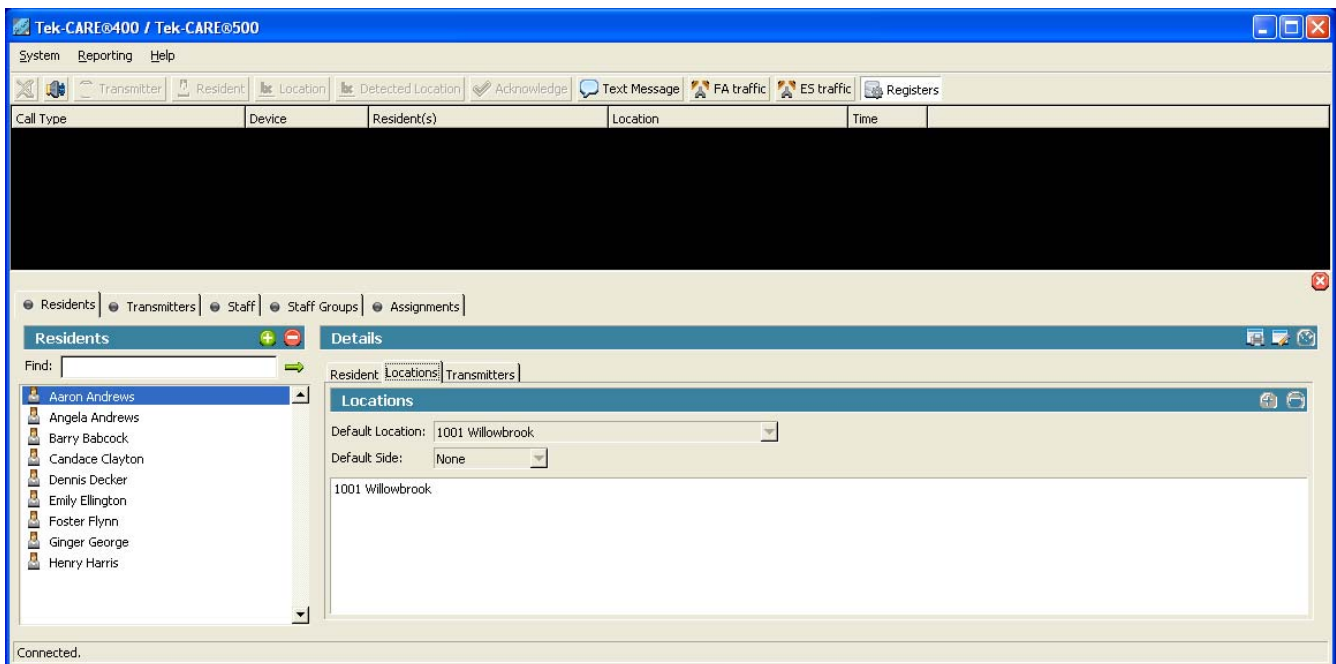
FIGURE 69. Add Residents Locations

- A window will pop up that lists the locations in your facility.
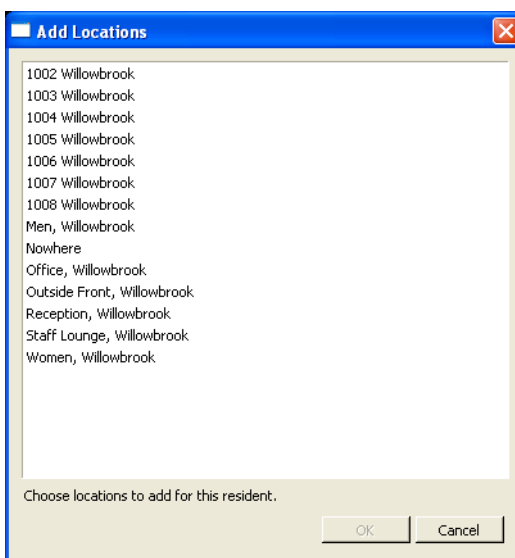
FIGURE 70. Add Locations Pop Up Window

- Select the resident's location (room) from the list and click the **OK** button. (To select multiple locations, hold the Ctrl key down and click each location before clicking the **OK** button.) If desired, choose a default location from the drop-down box; this location will be displayed when a call is placed from the resident's pendant transmitter.
- Click on the **Apply** ( ) button in the Residents-Details panel.
- Click on the **Printable** ( ) button to create a printable report of this resident's information.
- Repeat this procedure to add the next resident.

Assign Pendant Transmitters to Residents

The installer can complete this step now, or it can be completed by the facility staff after the system is physically installed.

In this step, you will assign individual pendant transmitters to the residents that will be carrying them.

The Tek-CARE500 system assigns the "Mobile" location to pendant transmitters. It uses NC511ES Locator/Repeaters to aid in determining where a resident is located when he/she places a call with the pendant transmitter.

Follow these steps to assign a pendant transmitter to a resident using the LS501 Event Monitor:

1. Click on the *Transmitters* tab in the Registers.
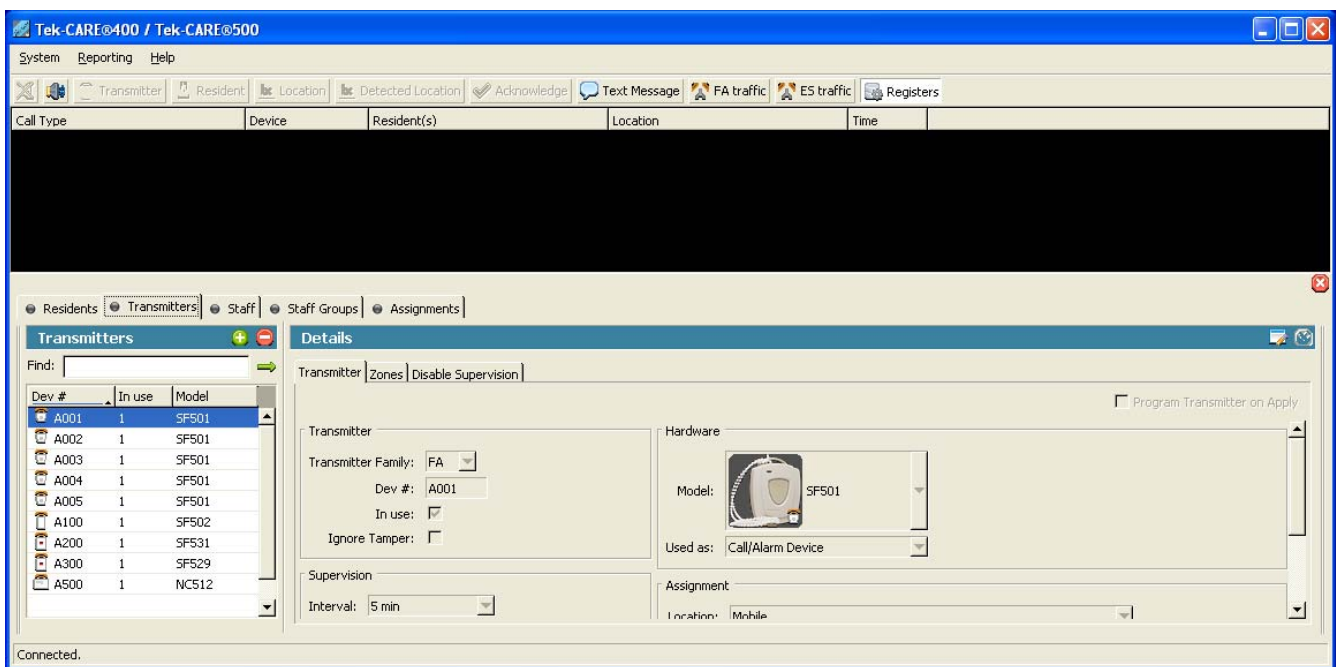
FIGURE 71. LS501 Event Monitor Transmitters Tab

2. Insert the battery into the pendant transmitter, and place a call.

3. If the transmitter has already been added to the system, it will appear as a call in the LS501 Event Monitor window. (If it does not appear in the Event Monitor window, add it using the instructions in ***Add Transmitters*** on page 92.)

4. Note the number assigned to the transmitter in the monitor window, and click on that transmitter in the list at the bottom left of the screen.

5. Click on the **Edit** (📝) button in the Transmitters-Details panel, scroll down to the Resident drop-down box, select a resident to assign the transmitter to.
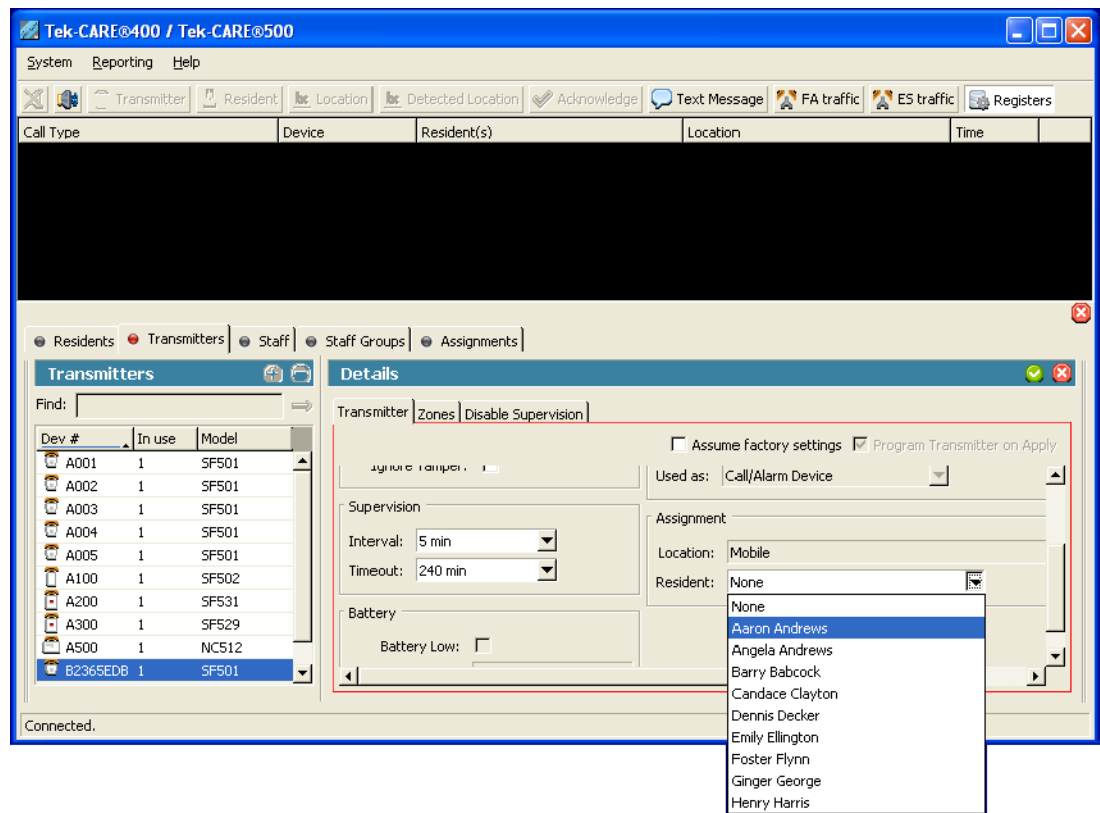
FIGURE 72. Assign a Pendant Transmitter to a Resident

6. Click the **Apply** (⊘) button. Cancel the call from that transmitter, and label the transmitter so that you can give it to the correct resident.
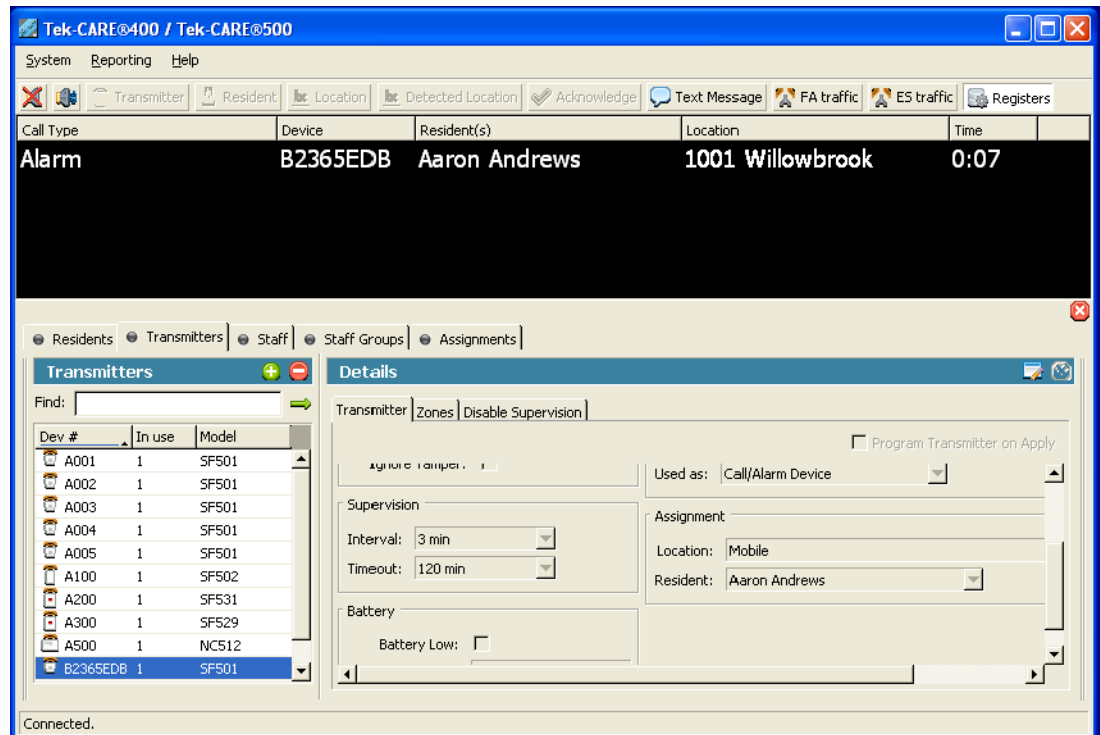
FIGURE 73. Example of an Alarm from an Assigned Pendant Transmitter

7. Repeat to assign another transmitter.

Assign Check-In Times to Check-In Transmitters

The installer can complete this step now, or it can be completed by the facility staff after the system is physically installed.

A check-in time is a time period during which the system requires a resident to press the room's check-in button or activate its motion detector. (Use SF502ES Wall-Mounted Call Transmitters, SF529ES Wireless Check-In/ Assistance Stations, or SF515ES PIR Motion Detectors.)

If the check-in button is not pressed (or the motion detector is not activated) during the scheduled time period, an Inactivity call appears in the LS501 Event Monitor.

Follow these steps to assign check-in times to check-in transmitters using the LS501 Event Monitor.

1. Click on the *Transmitters* tab in the Registers.

2. Click on the **Dev#** of a check-in transmitter in the list at the left. Refer to your completed programming worksheet to determine which resident's room the transmitter is located in. (SF502ES Wall-Mounted Call Transmitters, SF529ES Wireless Check-In/Assistance Stations, and SF515ES PIR Motion Detectors may be used as check-in transmitters.)

3. Click on the **Check In** tab in the *Transmitters-Details* panel. This tab is only available for transmitters that have been configured as check-in devices.
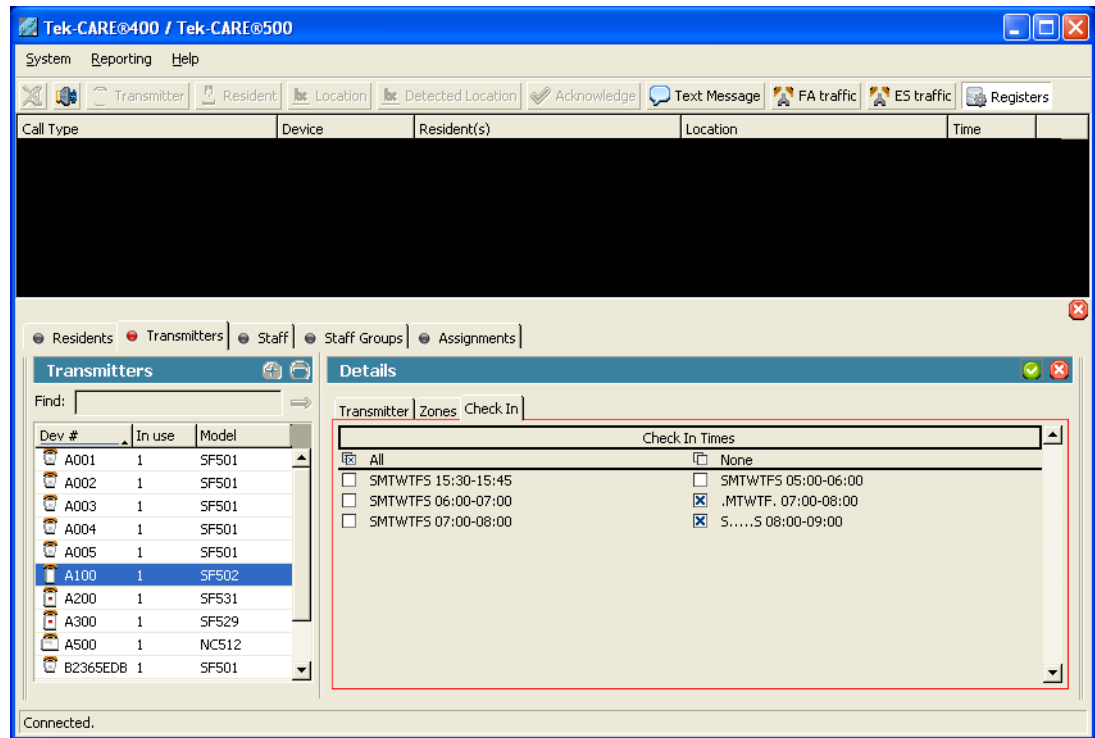
FIGURE 74. Assign Check In Times

4. Click on the **Edit** (🖉) button in the Transmitters-Details panel, select one or more Check In Times, and click the **Apply** (✅) button. Assign just one check-in time per day to a transmitter, although one check-in time may be assigned for weekdays and another for weekends.

Assign Transmitters to Zones

The installer can complete this step now, or it can be completed by the facility staff after the system is physically installed.

In this step, you will assign transmitters to the zones that were created using the Config Tool. Refer to your completed programming worksheet for transmitter locations.

Follow these steps to assign a transmitter to one or more zones using the LS501 Event Monitor:

1. Click on the *Transmitters* tab in the Registers.

2. Click on a transmitter in the transmitters list. Click on the *Zones* tab in the *Transmitters-Details* panel to view the zones to which the transmitter is assigned.
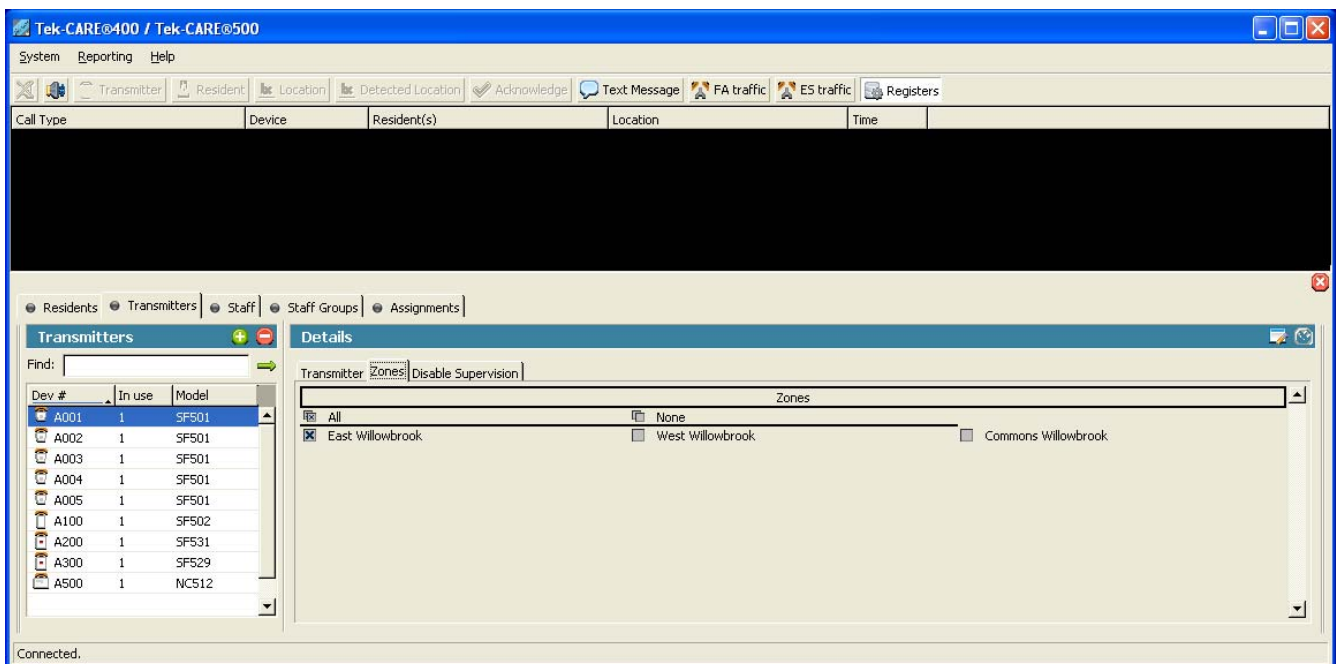
FIGURE 75. Assign a Transmitter to a Zone

3. To change the transmitter's zone settings:
   - Click on the **Edit** ( ) button.
   - Choose the zones to which to assign the transmitter.
   - Click on the **Apply** ( ) button.

4. Repeat this procedure for each transmitter.

Add Staff

The installer can complete this step now, or it can be completed by the facility staff after the system is physically installed.

Skip this step if all Staff members have been added using the Config Tool, or if your Tek-CARE500 system does not include pagers.

In this step, you will add staff members to the system and assign them individual pagers. Pagers were added to the system previously using the Config Tool.

If a pager has not yet been added to your system, complete Save the Configuration at the end of this chapter to save your current system settings. Then use the LS500 Config Tool Software to complete Add Pagers and Save and Implement the Custom Configuration in the System Installation section before returning to this step to add staff members.

Follow these steps to add Staff using the LS501 Event Monitor software:

1. Click on the *Staff* tab in the Registers.
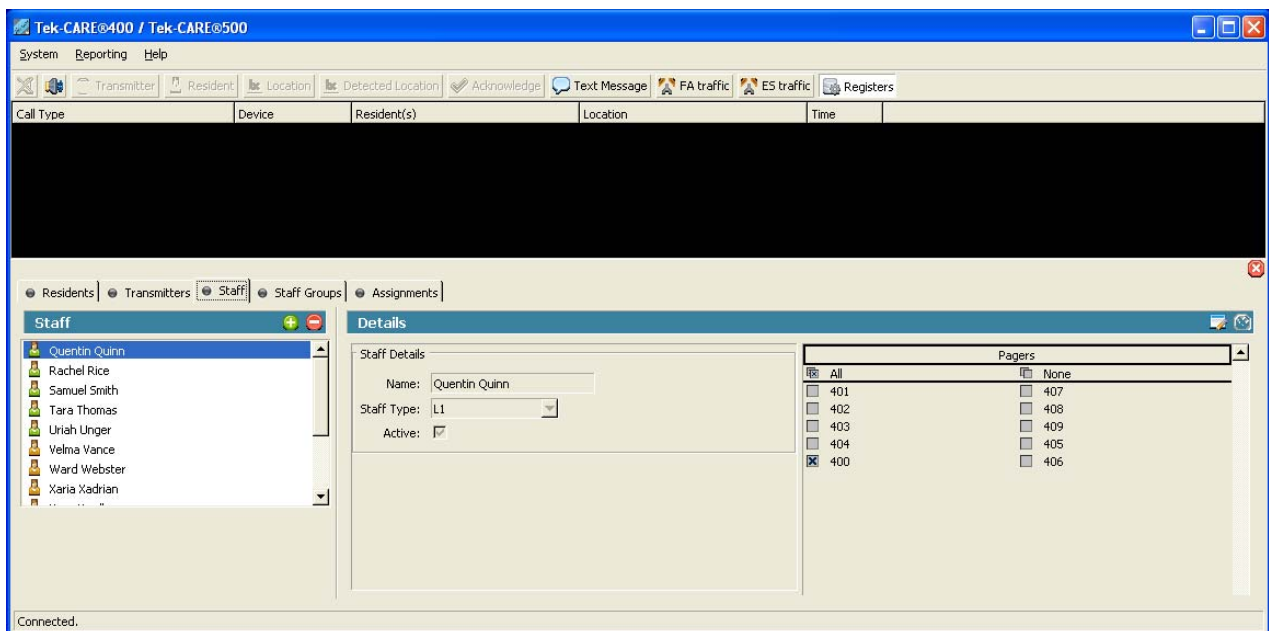
FIGURE 76. Add Staff

2. Click on the **Add** ( ) button in the Staff panel.

3. Type the staff member's name in the Name field of the Details panel. If desired, assign a staff type (L1, L2, L3) or leave the default "None."

4. Select a pager to assign to this staff member, and click on the **Apply** ( ) button.

5. Repeat this procedure to add each staff member.

Create Staff Groups

The installer can complete this step now, or it can be completed by the facility staff after the system is physically installed.

Skip this step if Staff Groups have been set up using the Config Tool, or if your Tek-CARE500 system does not include pagers.

A staff group is a group of staff members that have similar characteristics, for example, they work the same shift, cover the same zone, are all nurses, or are all aides. A staff member can be added to multiple staff groups.

Staff groups are used to send custom text messages to the pagers of a specific group of staff members. They may also be used to create assignments for automatic text messages.

Follow these steps to create staff groups using the LS501 Event Monitor software.

1.   Click on the Staff Groups tab in the Registers.
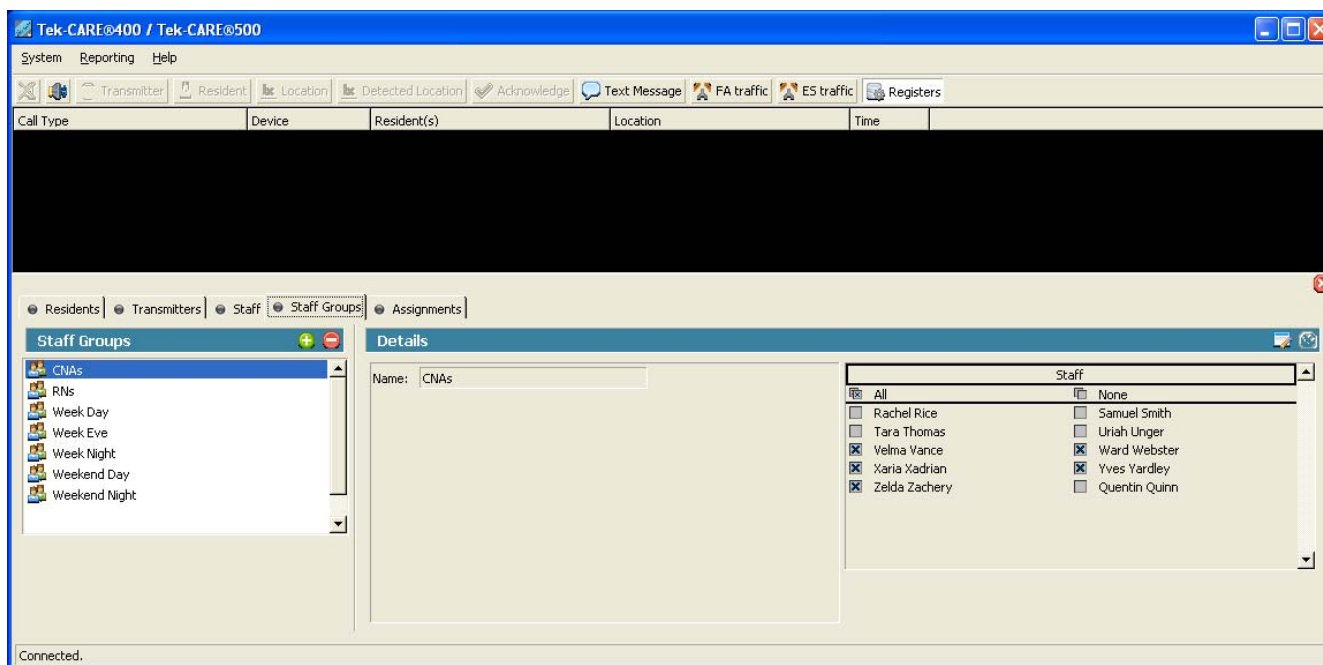
FIGURE 77. Create Staff Groups

2.   Click on the **Add** (⊕) button, and type a name for the group in the Details panel.

3.   Select one or more staff members to add to the group and click on the **Apply** (✓) button.

4.   Repeat this procedure to add another staff group.

Create Assignments

The installer can complete this step now, or it can be completed by the facility staff after the system is physically installed.

Skip this step if Assignments have been set up using the Config Tool, or if your Tek-CARE500 system does not include pagers.

The Tek-CARE500 system sends automatic text messages to pagers in response to calls from transmitters. Assignments are the final step in customizing your system to send automatic text messages to staff pagers.

Assignments are used to assign shifts to staff and staff groups, which determines when they will receive automatic text messages. Assignments are also used to assign transmitters and/or zones to staff and staff groups, which determines which transmitters will send them automatic text messages.

If you need additional shifts, complete Save the Configuration at the end of this section to save your current system settings. Then use the LS500 Config Tool software to complete Create Shifts and Save and Implement the Custom Configuration in the System Installation section before returning to this step.

Follow these steps to create assignments using the LS501 Event Monitor software:

1. Click on the *Assignments* tab in the Registers. A staff assignment consists of three main parts:
- the staff who will receive pages
- the shift when they will receive them
- the transmitters or zones that they will receive them from.
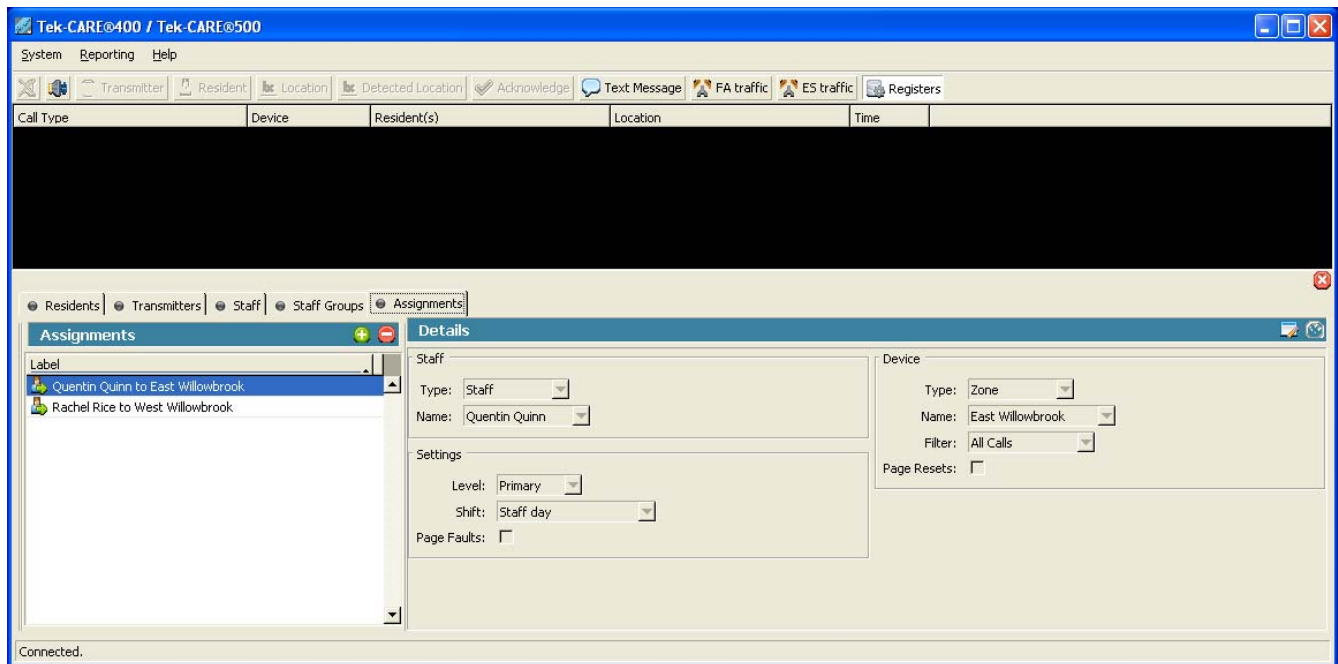
FIGURE 78. Create Assignments

2.   Click on the **Add** (➕) button.

3.   Choose the staff type (staff, group, or all staff) and staff name (the name of a staff member or a staff group).

4.   Choose the level (primary, secondary, or tertiary) and the shift. Also choose whether to send pages for faults.

5.   Choose the device type (a transmitter, zone, or all devices), the specific transmitter or zone, and the filter (all calls, no calls, only code, or high priority calls). Also choose whether to send a page when a call is reset.

6.   Click on the **Apply** (✅) button.

7.   Repeat procedure to create additional staff assignments.

Save the Configuration

In this step, you will save a copy of your final custom configuration on the hard drive of the NC501ES Master Station Computer. This copy can be used to reload your current configuration to the Tek-CARE500 system, if needed.

The configuration is saved using the LS500 Config Tool software, an offline programming tool used for offline configuration of your Tek-CARE500 system. It is also used to save and reload custom configurations.

1. If the LS501 Event Monitor is not running, double-click the LS501 Event Monitor icon on the desktop to start the Tek-CARE500 software. When it is connected (shown in the lower-left of the Event Monitor window), continue.

2. Load the current system configuration into the LS500 Config Tool software. This step loads the configuration as it currently exists on the LS501 Event Monitor, including residents, resident location assignments, resident transmitter assignments, and transmitters added using the LS501 Event Monitor software.

    - If the LS500 Config Tool is running, select **File > Load Configuration From System**.
    - If the LS500 Config Tool is not running, double-click the LS500 Config Tool icon on the desktop, and click on **Load Configuration From System**.

3. When the LS500 Config Tool window appears, save and back up the new configuration file:

    - Select **File > Save Configuration As** and choose a filename (such as today's date) for the configuration file you are creating. By default, this file is saved on the NC501ES Master Station Computer's hard drive in the *C:\Program Files\TekTone\LS450\Configs* directory with a file extension of .nc4. If desired, you may save this file to another location, such as the Desktop.

NOTE:

TekTone strongly recommends that you save your configuration whenever it is modified, and back up your saved configuration file to a CD-R disc or a USB flash drive (not included).

Print the Central Monitoring Device List

If the system includes Central Monitoring, use the LS500 Config Tool to print the Central Monitoring Device List whenever changes are made to the system programming (new residents, for example). See complete instructions in **Central Monitoring** on page 85.

7 Complete the Installation

This chapter describes the final installation of the Tek-CARE500 System.

Remote Device Installation

After the hardware is added to the Tek-CARE500 System using the Config Tool and Event Monitor, physically install the repeater/locators and stationary transmitters in their final locations. The stationary remote devices may have wall mounting hardware, or may be installed in non-metal back boxes designed for a flush mount. Mobile devices come with belt hooks, and necklaces.

Verify that all equipment has been set up and identified as described in **System Setup, Programming Using the LS500 Config Tool**, beginning on page 61.

Verify that the assigned location for each transmitter has been recorded on the transmitter or on its packaging.

Verify that there is a record of the locations in which the equipment will be permanently installed. (See **Locations** on page 64.)

Install repeater/locators in the locations determined by the site survey, and indicated on the Proximity Maps, blueprints, equipment packaging, and/or worksheets created when the hardware was entered into and identified by the Tek-CARE500.

Install call stations into permanently located back boxes (if flush mounted), or install the wall-mounted back boxes.

> **NOTE:**
>
> DO NOT install any transmitter into a metal back box. The metal interferes with signal transmission. Any metal back boxes provided for installation will have to be replaced with plastic or fiberglass back boxes.

As each piece of equipment is installed, ensure that the batteries are properly inserted and that there are no loose connections.

Verify that the components have been physically installed in the location to which they were assigned in the Config Tool and the Event Monitor.

Test the Installation

This step will proceed more quickly using an assistant and two-way radios or cell phones.

Follow this procedure to test the system's transmitters one at a time:

1.   Click on the LS501 Event Monitor icon to start the program.

FIGURE 79. LS501 Event Monitor Icon

The LS501 Event Monitor will open.
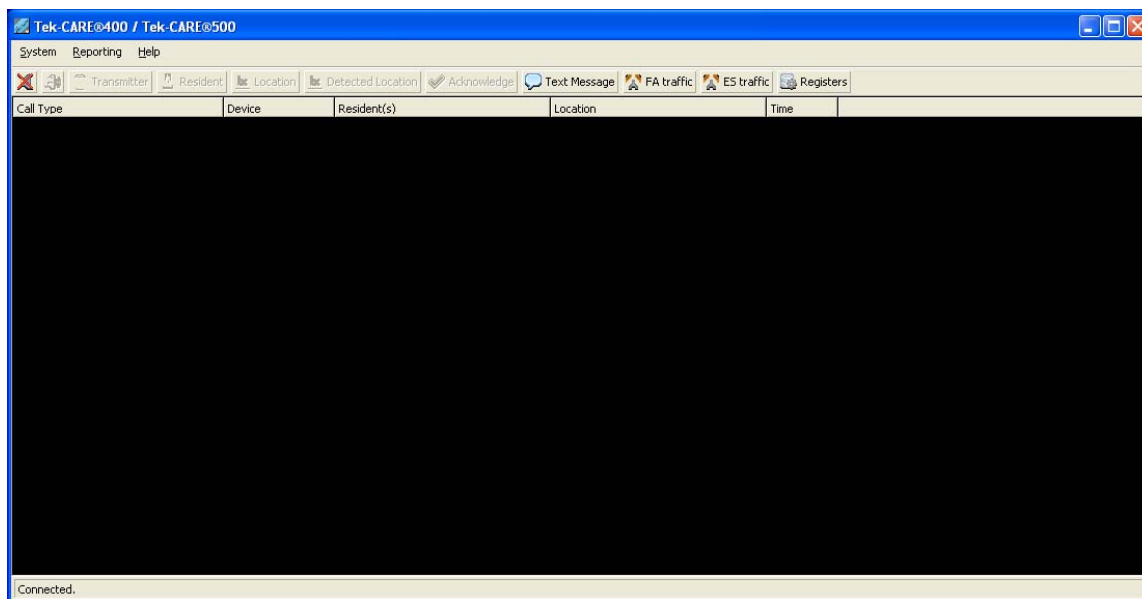
FIGURE 80. LS501 Event Monitor

2.   Initiate a call from a transmitter.

3.   Verify that the call is displayed in the LS501 Event Monitor window, that the NC501ES Master Station Computer's speakers play an alarm tone, and that the transmitter is assigned to the correct location and resident.

4.   For SF501, SF501ES, and SF501/2ES Pendant Transmitters, click the **call line** in the Event Monitor window, and then click the **Show detected location** button. Verify that the proximity map shows the location of the nearest NC511ES Repeater/Locator as a black X.
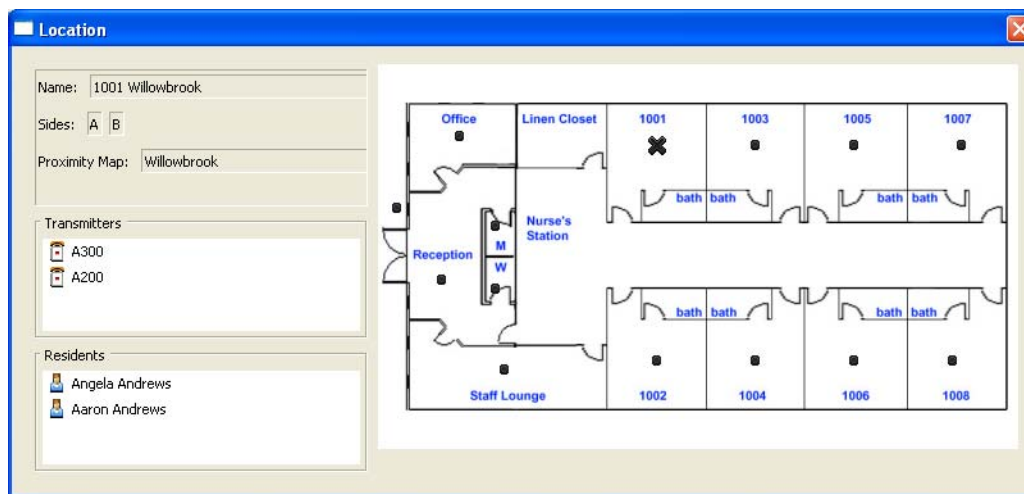
FIGURE 81. LS501 Event Monitor Locations on a Proximity Map

5. For all other transmitters, click the **call line** in the Event Monitor window, and then click the **Show location** button. Verify that the proximity map shows the transmitter's correct location as a black X.

6. Cancel the call. Verify that the call disappears from the LS501 Event Monitor window.

7. Repeat this procedure to test each transmitter.

Use the information found here to troubleshoot the installation.

TABLE 7. Troubleshooting the Tek-CARE 500 Wireless Emergency Call System

Problem	Possible Cause	Solution
Transmissions are not displayed on screen, and a "Receiver Fault" is displayed on the Event Monitor.	No power to the receiver.	Verify that receiver is plugged in. Verify that receiver is powered by removing its cover and checking that the three red LEDs are flashing.
	No connection or bad connection from the receiver to the PC.	Check the connections between the receiver and the PC. Verify that comm port setting in the configuration menu (signal interface setup) matches the actual connection.
	The receiver is damaged.	Contact TekTone Technical Support at (800)327-8466.
Transmissions are not displayed on screen.	Transmitters were removed from service.	Verify that the In use box in the Transmitters Register/Details section is checked.
Audible indications are not heard.	No power to the speakers and/or volume is turned down.	Increase speaker volume. Check MS Windows volume setting.
	No valid audio file has been selected.	Verify settings using LS500 Config Tool (Call Types tab).
Can't print reports.	No power to the printer.	Verify that printer is connected and has power.
	Printer's settings are incorrect.	Check printer driver and configuration in MS Windows.

TABLE 7. Troubleshooting the Tek-CARE 500 Wireless Emergency Call System (Continued)

Problem	Possible Cause	Solution
Messages are not sent to pagers, and a "Pager Fault" is displayed on the Event Monitor.	No power to the paging transmitter.	Verify that paging transmitter is plugged in and red LED is lit.
	No connection or bad connection from the paging transmitter to the PC.	Check the connections between the paging transmitter and the PC. Verify that comm port setting in the configuration menu (paging interface setup) matches the actual connection.
	Paging transmitter has been damaged.	Contact TekTone Technical Support at (800)327-8466.

Add an LS586 Remote Event Monitor

> **NOTE:**
>
> TekTone recommends that this part of the installation be completed by the facility's System Administrator because remote monitors will be installed on the facility's networked computers.

The LS586 Remote Monitor can be installed on up to nine computers on the facility's local area network (LAN). It is used to monitor system activity and to create reports using a web browser.

> **NOTE:**
>
> The LS586 Remote Event Monitor software is a supplemental system monitoring tool and must not be used as the primary means of annunciation for the Tek-CARE500 system. To respond to calls, staff must have access to certain features that are available only on the NC501ES Master Station Computer. These features include the ability to clear calls from some transmitter types, to view resident and transmitter information, and to view call locations. Therefore, locate the NC501ES Master Station Computer where primary caregiving staff have access to it.

To complete the installation:

- Connect the NC501ES Master Station Computer to the facility's network. See Figure 49. ***Connections to the NC501ES Master Station Computer's Expansion Ports***, on page 51 for facility LAN port location.
- Assign a static IP address to the NC501ES Master Station Computer.
- Ensure that the master station computer's auxiliary network interface is configured for access via a LAN.

Follow these steps to install the software on the remote computers.

1. Open a web browser, such as Internet Explorer, on the networked PC on which the LS586 Remote Monitor will be installed.

2. Type the master station computer's static IP address into the web browser's address bar.

3. When the Reporting System window appears, click on the **Download the Client** button.

4. Click on the **Run** button, and then click on **Run** again. When the Tek-CARE400-500 LS586 Setup: Installation Options window appears, click on the **Install** button.

5. When the Tek-CARE400-500 LS586 Setup: Installation Completed window appears, click on the **Close** button. This installs the client software and places an LS586 Event Monitor icon on the computer's desktop.

6. To start and configure the LS586 Remote Monitor, double-click the **LS586 Event Monitor** icon on the desktop. When the Remote Event Monitor window appears, continue.

7. Click on the **System** menu at the top of the Event Monitor window and then select **Connection Settings**. The Connections Settings window will appear.
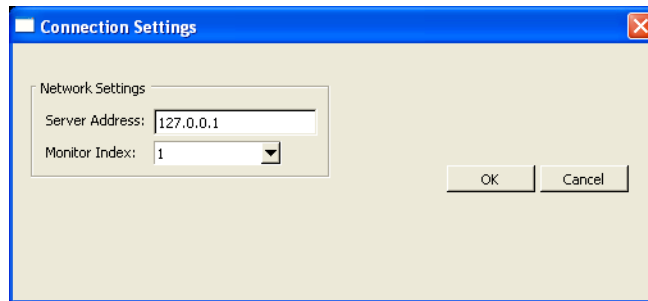
FIGURE 82. LS586 Remote Event Monitor Connection Settings

8. Enter the master station computer's static IP address in the Server Address box.

9. Choose a Monitor Index (1 - 9) to assign to this PC. Each PC that uses the LS586 Remote Event Monitor software must be assigned a unique Monitor Index.

10. Click **OK** to save the connection settings.

NOTE:

Shutting down the LS586 Remote Monitor causes a monitor fault at the NC501ES Master Station Computer. To clear a monitor fault, select **System > Redetect** from the LS501 Event Monitor's menu bar on the NC501ES Master Station Computer.

---

8   *Using the Tek-CARE500*

> **NOTE:**
>
> The NC501ES Master Station Computer must be dedicated to the Tek-CARE500. Do not run non-Tek-CARE500 applications on the master station computer. In addition, due to the critical nature of the Tek-CARE500 reporting features, all power saving features on the master station computer and monitor have been disabled.

During the Tek-CARE500 installation, technicians use the LS500 Config Tool and the LS501 Event Monitor to identify and assign equipment to locations, to create the data fields that will be used to enter information, and to commit those changes to the Tek-CARE500 network. After the system is set up, the LS501 Event Monitor is where all of the "events" (such as emergency calls, paging and other alarms) are monitored.

This section is designed to serve two purposes:

- It is designed to serve as a guide to the everyday use of the Tek-CARE500; it includes information for the end-user about the Tek-CARE500 user interfaces (the LS501 and LS586 Event Monitors), using the equipment included in the system (pendants and other transmitters), adding data, and using data in various report formats.
- It can be used by installation technicians and facility staff as a guide to maintaining the Tek-CARE500 database. The database can be maintained by the installation company's technician or by the facility's staff.

Saving and Retrieving the Configuration

The Tek-CARE500 master station computer is designed to run continuously. It should be protected by an uninterruptible power supply (UPS), and shut down only in the event of a catastrophic failure.

When changes are made to the system and not saved to a configuration file, those changes may be lost after a power failure.

Therefore, whenever changes are made using the Config Tool, save the new custom configuration to a file and then commit the configuration to the Tek-CARE500 network. This process is described in ***Save and Implement the Custom Configuration*** on page 90.

Whenever changes are made using the Event Monitor, save the new custom configuration to a file. This process is described in ***Save the Configuration*** on page 107.

The LS501 Event Monitor

Instructions are found in these sections:

- ***Using the LS501 Event Monitor***
  - Place and Reset Calls
  - Password Protection
  - Add a New Resident
  - Assign a Pendant Transmitter to a Resident
  - Move a Resident to Another Room
  - Remove a Resident from the System
  - Reassign a Pendant Transmitter to Another Resident
  - Temporarily Remove a Pendant Transmitter from Use
  - Disable Supervision of a Pendant Transmitter
  - Delete a Pendant Transmitter from the System
  - Send a Text Message
  - Using the Resident Check-In Feature
  - Low Battery Replacement
  - Missing Transmitters
  - Tampered Transmitters
  - The LS586 Remote Event Monitor Screen
  - Menus
  - Buttons
  - Clear a Monitor Fault
  - Save and Back Up the Current Configuration
  - Reload a Previously Saved Configuration
- ***Tek-CARE500 Reporting System***
  - Low Battery Report
  - Launch Reporting
  - About Datasets
  - Creating a Report
  - Report Options
  - Data Backup
- ***Using an LS586 Remote Event Monitor***
  - LS586 Event Monitor Reporting System
  - Text Message

Using the LS501 Event Monitor

The software associated with the LS501 Event Monitor must be running on the master station computer before other Tek-CARE500 software can be used. Double-click the **LS501 Event Monitor** icon to start the program. These windows appear automatically:
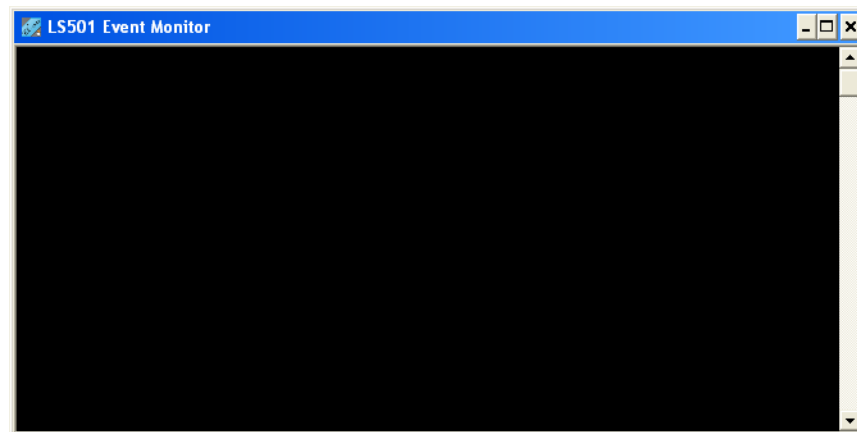
FIGURE 83. LS501 Event Monitor Background Application Window
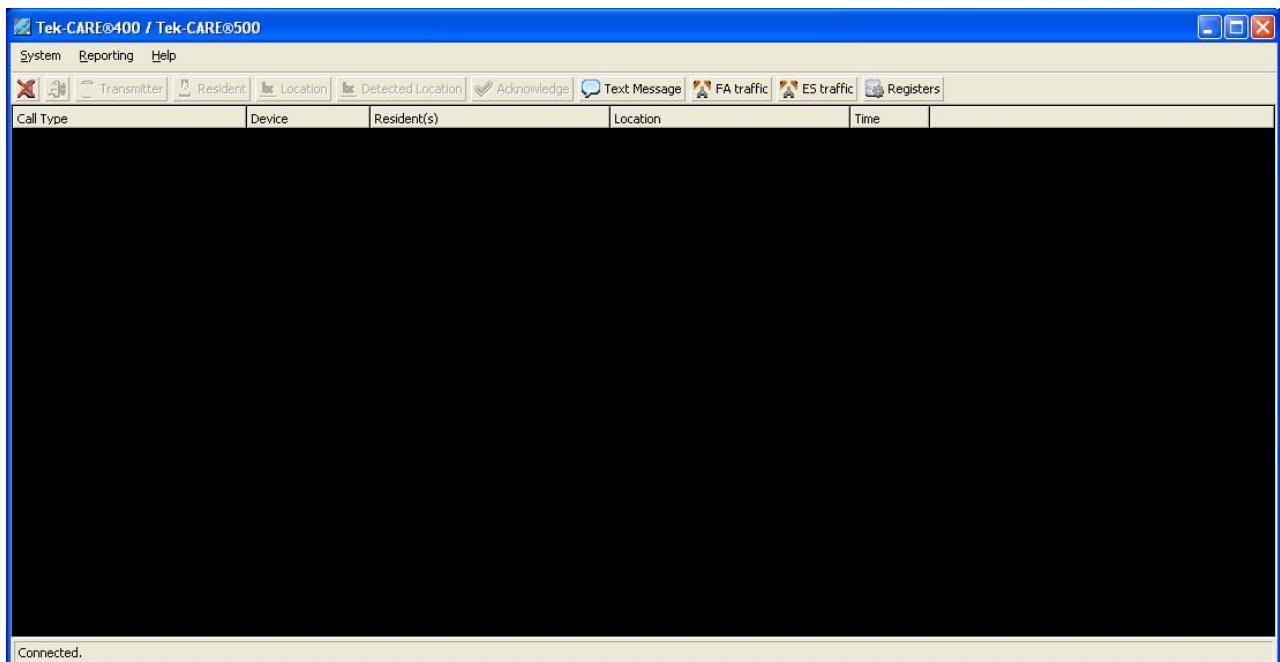
FIGURE 84. LS501 Event Monitor Window

When opened, there are two windows that are referred to as the LS501 Event Monitor. The first window is called the *LS501 Event Monitor*; this software runs in the background. It does not need to remain visible on the computer's screen as it functions, and can be minimized. All events related to the Tek-CARE500 system are listed on this screen as they are received by the system.

The second window is labeled *Tek-CARE®400 / Tek-CARE®500*. This window provides the interface between the information collected by the software and the user. This is the window that is used by the facility's staff to monitor calls and add transmitters during installation.

After the Event Monitor window is open, click the Registers button to display the panels described in the following table.

TABLE 8. Registers

Tab	Panel Contents
Residents	Contains data about each resident. The fields are added using the Config Tool during installation.
Transmitters	Contains factory defined data fields for each transmitter and receiver. Use this window to capture Dev #'s and define the transmitter or receiver to the Tek-CARE500.
Staff	Contains staff detail fields that can be used when entering staff member names to the system. Used only when the system includes pagers.
Staff Groups	Allows assignment of staff members to specific groups, for example: Nurses, Aides, Maintenance, Housekeeping, etc. Used only when the system includes pagers.
Assignments	Allows creation of staff assignments. These are used to assign specific transmitters or zones to a staff member or a staff group, who will then receive automatic text messages triggered by calls from the assigned transmitters. Used only when the system includes pagers.
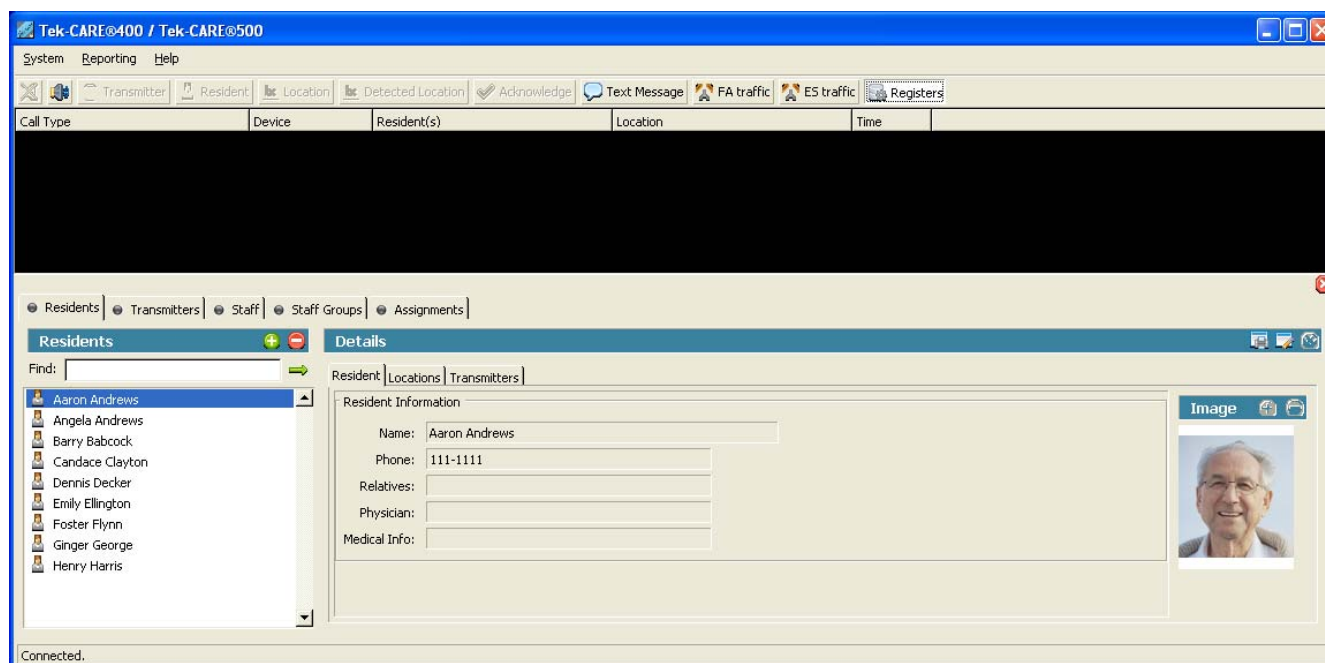
FIGURE 85. LS501 Event Monitor Registers

The Tek-CARE500 Event Monitor Operating Window

This section provides a brief description of the various parts of the operating window.

Double-click the **LS501 Event Monitor** icon to open the Event Monitor window, when it is not already running.

FIGURE 86. LS501 Event Monitor Icon

After the system loads the LS501 Event Monitor, click on the **Registers** button to open the programming and site information registers. At this point the display on the control panel will resemble the figure below.

Menu Bar ➡
Button Bar ➡
Call Display ➡
Register Tabs ➡
Register Panels ➡
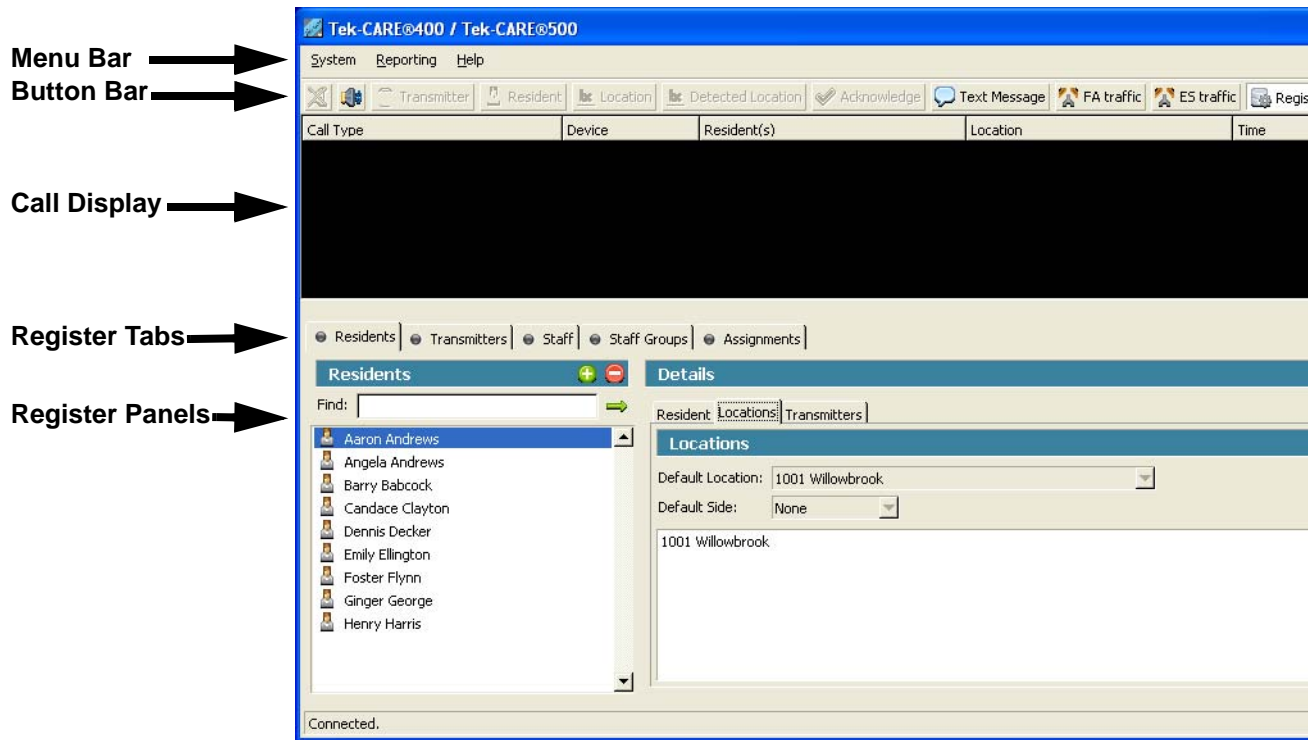
FIGURE 87. LS501 Event Monitor Window

- **Menu Bar**
  Menu items are available to clear a Monitor Fault (System menu), to exit the Event Monitor program (System menu), to Launch Reporting (Reporting menu), to view the Low Battery Report (Reporting menu), and to view the software version number (Help menu).

- **Button Bar**
  This bar includes buttons used to silence (or "unsilence") non-emergency call tones; show transmitter information, resident information, or location of a call displayed in the Event Monitor; acknowledge (cancel) a call from some types of transmitters; send a manual text message; view transmitter signal traffic; and display or hide the Registers.

- **Call Display**
  This panel displays a list of currently active calls. The following information is provided for each active call:
  - Call Type
  - Transmitter device number
  - Resident name
  - Location
  - Time elapsed since the call was initiated.

- **Registers**
  This panel consists of Registers that are accessed by clicking on the various Register tabs. The Registers are used to view and modify information about:
  - Residents
  - Transmitters
  - Zones
  - Staff
  - Staff groups
  - Assignments

Menu Bar

The Menu Bar provides access to the following drop-down menus:

- **System Menu**
  - **Redetect**
    Clears a Monitor Fault from the LS501 Event Monitor window. A monitor fault occurs when a Remote Event Monitor PC closes its copy of the LS586 Remote Event Monitor software.
  - **Exit Alt-F4**
    Closes all interfaces and terminates the Tek-CARE500 software application. No information will be displayed or logged when the software is not running. (The Alt+F4 combination performs the same function.)
- **Reporting Menu**
  - **Launch Reporting**
    Starts the Tek-CARE500 Reporting System.
  - **Low Battery Report**
    Creates the Tek-CARE500 Low Battery Report, which shows the transmitter ID (Dev #), hardware type, location and resident associated with transmitters that need new batteries.
- **Help Menu**
  - **About Tek-CARE500**
    Displays the software version number.

Buttons

The buttons found on the LS501 Event Monitor's button bar are:

- **Silence**
  Click (while a call is active) to turn alarm tones off. Emergency alarm tones cannot be silenced.
- **Unsilence**
  Click (while a call is active) to turn alarm tones on.

- **Show transmitter**
  Click on a call in the Event Monitor, and then click the Show transmitter button to display the calling transmitter's Register information.

- **Show resident**
  Click on a call in the Event Monitor, and then click the Show resident button to display the calling resident's Register information.

- **Show location**
  Click on a call in the Event Monitor, and then click the Show location button to display the proximity map with the calling transmitter's location highlighted. (Pendant transmitters display the default location.)

- **Show detected location**
  Click on a call from a pendant transmitter in the Event Monitor, and then click the **Show detected location** button to display the proximity map with the nearest repeater/locator's location highlighted. (Requires NC511ES Locator/Repeaters.)

- **Acknowledge**
  Click on a call in the Event Monitor, and then click the Acknowledge button to reset the call and remove it from the list.

  This button clears calls placed only from devices that are programmed as acknowledge devices, which may include:
  - SF502 and SF502ES Wall-Mounted Call Transmitters,
  - SF505 and SF505ES Wireless Smoke Detectors,
  - SF515 and SF515ES PIR Motion Detectors,
  - SF520 and SF520ES Door/Window Egress Wireless Transmitters, and
  - SF525, SF526, SF525ES and SF525/2ES Universal Contact Transmitters.

  All other calls must be cancelled in person at point of origin.

- **Text Message**
  Click on this button to send a manual text message to one or more staff members, staff groups, or staff types. (Disabled unless RF Paging is enabled.)

- **FA Traffic**
  Click on this button to view the signals that the NC510 Receiver is receiving from FA transmitters. This button is primarily used for troubleshooting, and while adding new FA transmitters to the system.

- **ES Traffic**
  Click on this button to view the signals that the NC510ES Receiver is receiving from ES transmitters. This button is primarily used for troubleshooting, and while adding new ES transmitters to the system.

- **Registers**
  Click on this button to display the systems registers.

Registers

Click on the Registers button at the top right of the Event Monitor window to access the registers listed here. To view a specific register, select its corresponding tab. These registers are available:

- **Residents**
  This register displays a list of residents, along with tabbed panes that display resident information, assigned locations, and assigned transmitters. It is also used to add or remove residents from the system.

- **Transmitters**
  This register displays a list of all transmitters and repeater/locators in the system. Tabbed panes show additional information about the transmitter, including its location, assigned resident, device number, its zones, and supervision. It is also used to add or remove transmitters from the system, and to assign transmitters to residents.

- **Staff**
  This register displays a list of all staff and their assigned pagers. It is also used to add or remove staff members and to assign pagers to staff members. See *Add Pagers* on page 79.

- **Staff Groups**
  This register displays a list of all staff groups. It is also used to add or remove groups and to assign staff members to the groups.

- **Assignments**
  This register displays a list of staff assignments. It is also used to assign or remove annunciation of individual transmitters and zones to specific staff members, staff groups, staff shifts or staff levels.

Place and Reset Calls

Calls are placed from various transmitters within the system. The system may include some or all of the transmission devices included in this table:

TABLE 9. How to Place and Reset Calls

Transmitter	Place Call	Reset Call
SF501ES Water-Resistant Single Button Pendant Call Transmitter A water resistant transmitter suitable for use in showers and bathtubs. The SF501ES includes a lightweight neck chain, which will separate to prevent choking if it is pulled tight.	Press and hold the large button on the front of the transmitter for at least 1 second. The SF501ES transmitter will transmit the call and its call-assurance LED will blink rapidly.	Use a ballpoint pen or similar device to press the recessed black button on the back of the transmitter. The transmitter will send a reset signal to the system and its call-assurance LED will blink rapidly. Call cannot be reset at the Tek-CARE500 master station computer; it must be reset in person.
SF501/2ES Water-Resistant Dual Button Pendant Call Transmitter A water resistant transmitter suitable for use in showers and bathtubs. The SF501/2ES includes a lightweight neck chain, which will separate to prevent choking if it is pulled tight.	Press and hold both buttons on the front of the transmitter for at least 1 second. The SF501/2ES transmitter will transmit the call and its call-assurance LED will blink rapidly.	Use a ballpoint pen or similar device to press the recessed black button on the back of the transmitter. The transmitter will send a reset signal to the system and its call-assurance LED will blink rapidly. Call cannot be reset at the Tek-CARE500 master station computer; it must be reset in person.
SF502ES Wall-Mounted Call Transmitter May be used either as a call button or a resident check-in button.	Press and hold the large button on the front of the transmitter for at least 1 second. The SF502ES transmitter will transmit the call and its call-assurance LED will blink rapidly. For Resident check-in, push the button during the scheduled check-in time period.	At the Tek-CARE500 master station computer, click on the call in the LS501 Event Monitor software and then click the Acknowledge button to reset the call.
SF505ES Wireless Smoke Detector **SF515ES PIR Motion Detector** **SF520ES Door/Window Egress Transmitter** **SF525ES, SF525/2ES Universal Contact Transmitter**	These transmitters place automatically generated calls.	At the Tek-CARE500 master station computer, click on the call in the LS501 Event Monitor software and then click the Acknowledge button to reset the call.

TABLE 9. How to Place and Reset Calls (Continued)

Transmitter	Place Call	Reset Call
SF527ES Wireless Support Module with SF337C Waterproof Emergency Switch or SF339 Pushbutton Emergency Switch **SF531ES Wireless Emergency Call Station (not waterproof)**	Push the red emergency switch down, push the red mushroom button in, or pull the attached cord. The transmitter will transmit the call and its call-assurance LED will light.	Push the red emergency switch up, or twist the red mushroom button. The transmitter will send a reset signal to the system and its call-assurance LED will go out. Call cannot be reset at the Tek-CARE500 master station computer; it must be reset in person.
SF529ES Wireless Check-In/Assistance Station	Push the gray assistance switch down or pull the attached cord. The transmitter will transmit the call and its call-assurance LED will light. For resident check-in, push the check-in button during the scheduled check-in time period.	Push the gray assistance switch up. The transmitter will send a reset signal to the system and its call-assurance LED will go out. Call cannot be reset at the Tek-CARE500 master station computer; it must be reset in person.
SF530ES Wireless Room Station	Push the call button at the end of the associated call cord. The transmitter will transmit the call and the call-assurance LED will light.	Push the reset button on the patient station. The transmitter will send a reset signal to the system and the call-assurance LED will go out. Call cannot be reset at the Tek-CARE500 master station computer; it must be reset in person.

Password Protection

Password protection is turned on or off via the LS500 Config Tool (See **Password Protection** on page 89). When password protection is turned on, a password must be entered in the LS501 Event Monitor software before information in the registers can be added, edited, or deleted. Calls and reports remain fully functional. After entering a valid password, all editing remains available until the registers are closed by clicking on the **Registers** button.

Add a New Resident

"Residents" are the recipients of care at the facility. The Tek-CARE500 associates individual residents with their respective rooms (locations) and transmitters, so it can show which resident has placed a call (activated his or her transmitter).

If a room has two residents, each of them can be assigned to the same location and stationary transmitter. Both names will then be displayed on the Event Monitor when a call is placed from that transmitter.

In addition to resident name and location, the system may have been customized by the installer to store other resident information, such as address, physician name and phone, relative name and phone, or medical information.
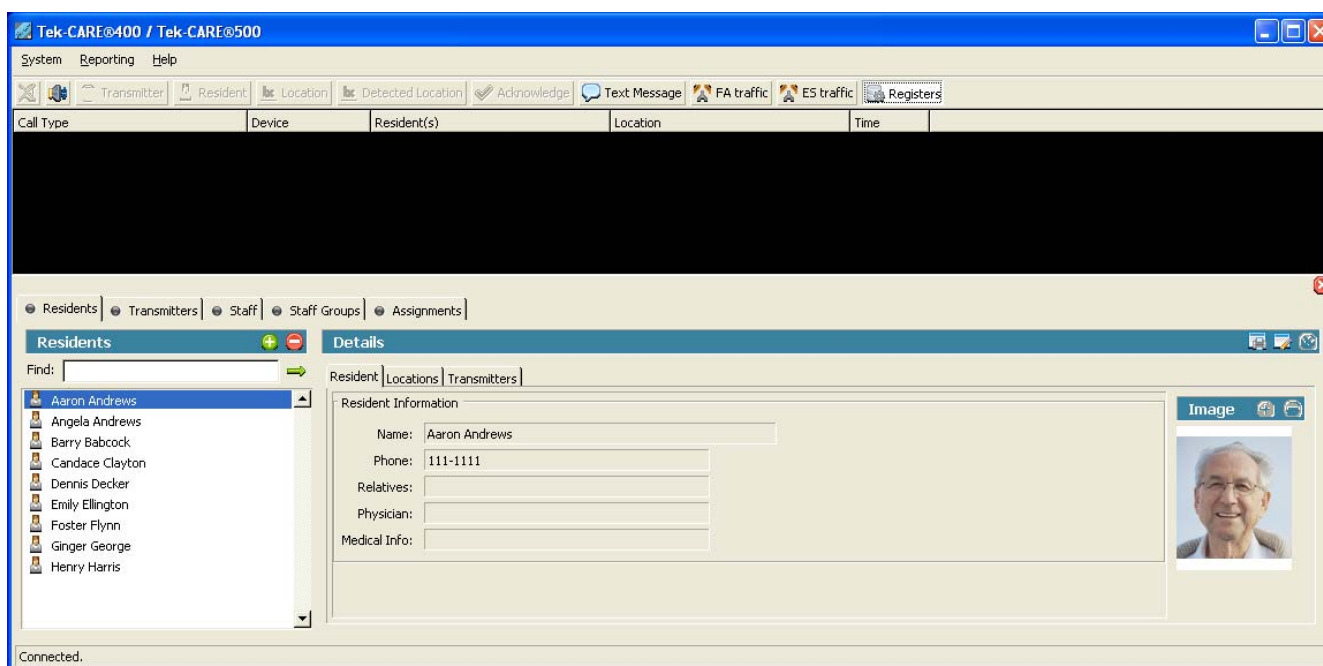
FIGURE 88. Add New Resident

In the LS501 Event Monitor software, click on the **Registers** button, and then click on the **Residents** tab.

Follow these steps to add the new resident:

1. Click on the **Resident** tab in the Residents-Details panel, and then click on the **Add** ( ) button in the Residents panel.

2. Type the resident's name in the Name field of the Residents-Details panel. If desired, complete any custom fields, such as Resident Phone or Physician. Use the Tab key to move from field to field. Press the keyboard Enter key to type additional lines of text within a field.

3. To include a resident photo, click on the **Add** ( ) button in the Image panel, browse to an image file on the hard drive, and click the **Open** button. (Image files may be in any of these formats: BMP, GIF, JPG, JPEG or PNG.) The Tek-CARE500 scales all resident photographs to 100 pixels wide by 125 pixels high.

4. Click on the **Locations** tab in the Residents-Details panel, and then click on the **Add** ( ) button on the Locations tab. A window will pop up that lists the locations in the facility. Select the resident's location (room) from the list and click the **OK** button. (To select multiple locations, hold the Ctrl key down and click each location before clicking the OK button.) If desired, choose a default location from the drop-down box; this location will be displayed when a call is placed from the resident's pendant transmitter.
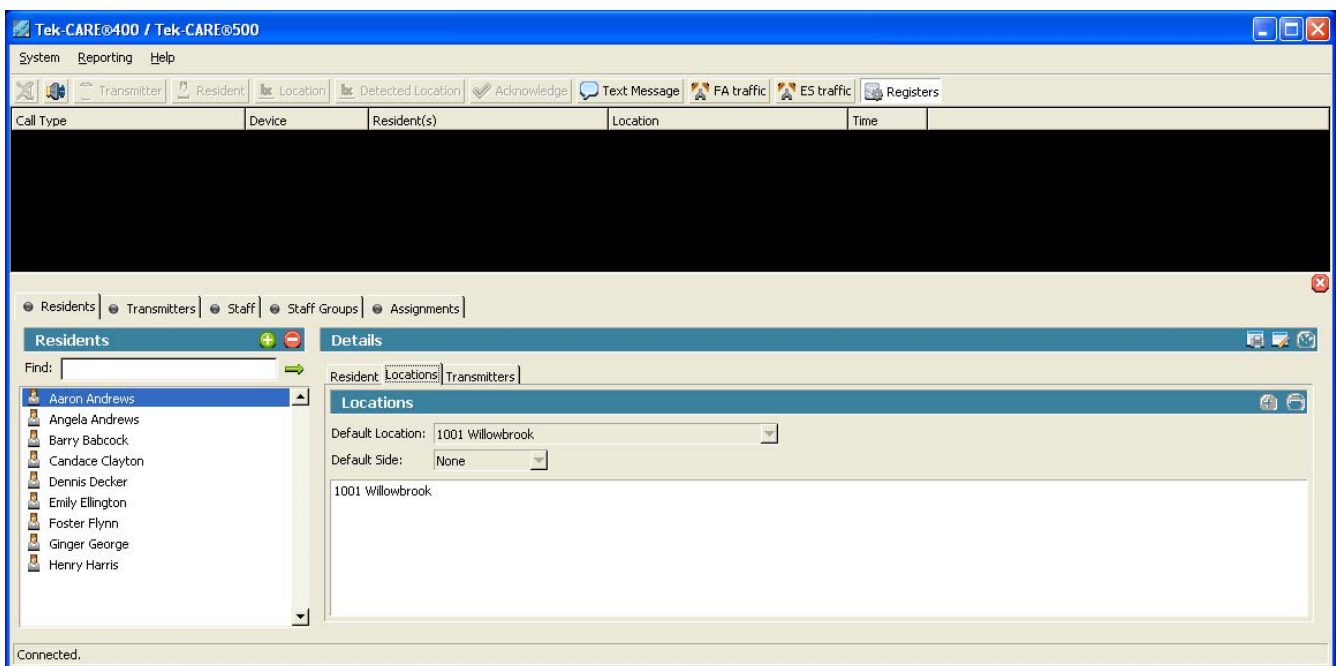

FIGURE 89. Add Resident's Location

5. Click on the **Apply** ( ) button in the Residents-Details panel.

6. Click on the **Printable** ( ) button to create a printable report of this resident's information.

When all of the Resident's information has been added, continue to the next section to assign a pendant transmitter to the Resident.

Assign a Pendant Transmitter to a Resident

SF501ES and SF501/2ES Pendant Transmitters are mobile transmitters carried by residents. The Tek-CARE500 associates individual residents with their respective pendant transmitters, so it can show which resident has placed a call (activated his/her transmitter). The Tek-CARE500 assigns the "Mobile" location to SF501ES and SF501/2ES Pendant Transmitters. It uses NC511ES Repeater/Locators to aid in determining where a resident is located when he/she places a call with the SF501ES or SF501/2ES Pendant Transmitter.

In the LS501 Event Monitor software, click on the **Registers** button, and then click on the **Transmitters** tab. Then, follow the steps in this section to assign an SF501ES or SF501/2ES Pendant Transmitter to the resident who will be carrying it. This is also where new pendant transmitters that have not yet been added to the system are added.
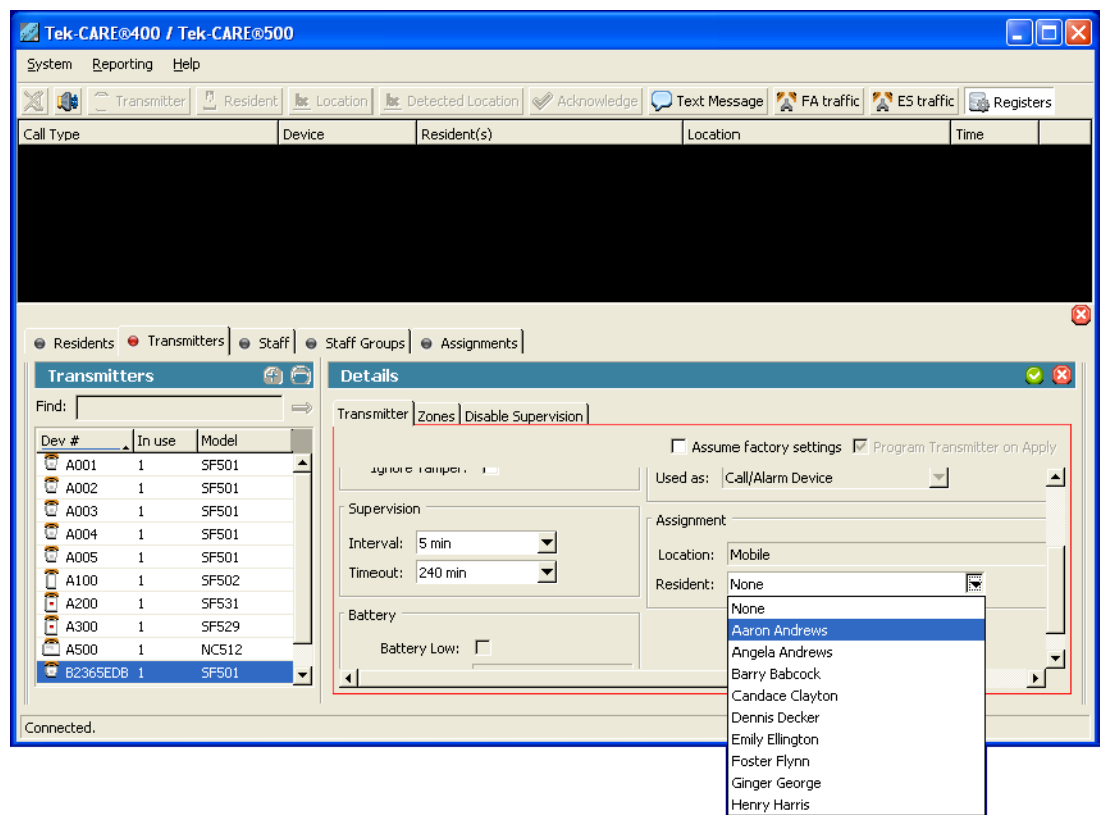

FIGURE 90. Assign Pendant to Resident

When the SF501ES or SF501/2ES Pendant Transmitter is in the system, and its Dev # is known:

1.   Click on the transmitter's **Dev #** in the list at the bottom left of the screen.

2.   Click on the **Edit** ( ) button in the Transmitters-Details panel and verify that the In use box is checked. Scroll down to the Resident drop-down box, select a resident to assign the transmitter to, and click the **Apply** ( ) button.

3.   Place a call from the transmitter and verify that it appears as a call in the LS501 Event Monitor window, with the correct resident's name in the Resident(s) column. Cancel the call.

4.   Label the transmitter in order to give it to the correct resident.

When the SF501ES or SF501/2ES Pendant Transmitter is not in the system, or its Dev # is not known:

1.   Insert the battery into the SF501ES Pendant Transmitter, and place a call.

2.   If the transmitter has already been added to the system and is marked In use, it will appear as a call in the LS501 Event Monitor window. (If it does not appear in the Event Monitor window, skip to Step 3 .)

      Note the number assigned to the transmitter in the Event Monitor window, and click on that transmitter in the list at the bottom left of the screen. Then click on the **Edit** ( ) button in the Transmitters-Details panel and verify that the In use box is checked. Scroll down to the Resident drop-down box, select a resident to assign the transmitter to, and click the **Apply** ( ) button. Cancel the call from that transmitter, and label the transmitter with the correct resident information. Return to Step 1 to assign another transmitter.

3.   If the transmitter does not appear as a call in the LS501 Event Monitor window, either it has been removed from service, or it has not yet been added to the system. Click on the **ES traffic** button in the LS501 Event

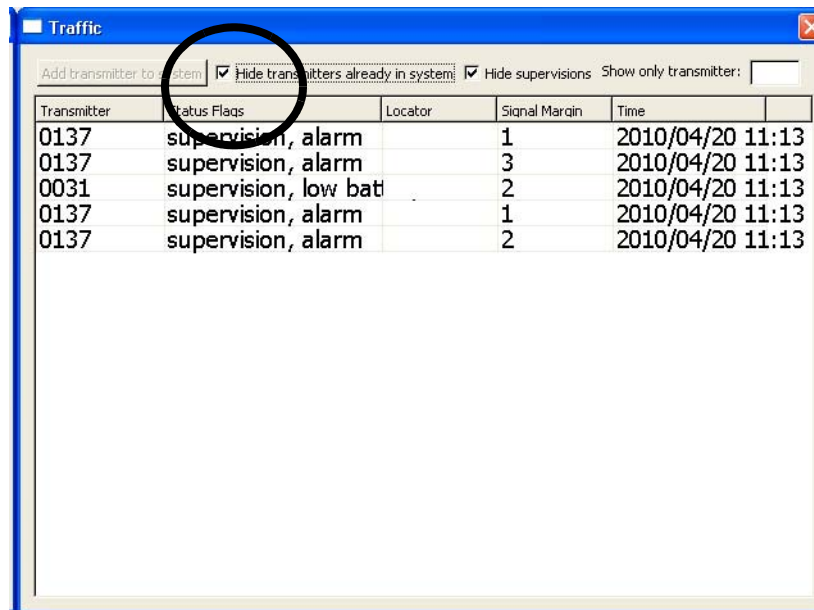Monitor, and check the box next to Hide transmitters already in system and the box next to Hide supervisions.

FIGURE 91. Traffic Pop-up Screen

If the transmitter has not yet been added to the system, the call will appear as an alarm in the Traffic window. (If it does not appear in the Traffic window, skip to Step 4 .)

Click on the alarm to highlight it, and then click on **Add transmitter to system** button. The Event Monitor window will pop up with the Transmitters Register highlighted. The Dev # appears in the Transmitters panel of the Transmitters Register.

In the *Transmitters* Register, *Hardware* panel, choose transmitter model SF501 from the drop-down box. Scroll down to the Resident drop-down box, select a resident to assign the transmitter to, and click the **Apply** ( ) button. The call appears in the Event Monitor window, including the resident's name in the Resident(s) column. Cancel the call from that transmitter; the call will disappear from the Event Monitor window. Label the transmitter with correct resident information. Return to Step 1 to assign another transmitter.

4. If the transmitter does not appear in the Traffic window, it has been added to the system and hasbeen removed from service. Uncheck the box next to Hide transmitters already in system in the Traffic window. The call will appear as an alarm in the Traffic window.

Note the number assigned to the transmitter in the Traffic window, close the Traffic window, and click on that transmitter in the list at the bottom left of the Transmitters Register. Then click on the **Edit** ( ) button in the Transmitters-Details panel, and check the In use box to

return the transmitter to service. Scroll down to the Resident drop-down box, select a resident to assign the transmitter to, and click the **Apply** (⊙) button. Cancel the call from that transmitter, and label the transmitter with correct resident information. Return to Step 1 to assign another transmitter.

Move a Resident to Another Room

To move a resident from one room to another room:

1. In the LS501 Event Monitor, click on the **Registers** button, and then click on the Residents tab. Click on the **Locations** tab in the Residents-Details panel.

2. Click on the resident's name in the list on the left side of the Residents Register, and then click on the **Edit** (📝) button in the Residents-Details panel.

3. Click on the resident's former room number in the list of locations, and then click on the **Delete** (⊖) button. on the Locations tab. Repeat to remove additional former locations.

4. Click on the **Add** (⊕) button on the Locations tab. A window will pop up that lists all locations in the system. Select the resident's location (room) from the list and click the **OK** button. (To select multiple locations, hold the Ctrl key down and click each location before clicking the OK button.) If desired, choose a default location from the drop-down box; this location will be displayed when a call is placed from the resident's SF501ES or SF501/2ES Pendant Transmitter.

5. Click on the **Apply** (⊙) button in the Residents-Details panel.

Remove a Resident from the System

To completely remove a resident from the system:

1. In the LS501 Event Monitor, click on the **Registers** button, and then click on the **Residents** tab.

2. Click on the resident's name in the list on the left side of the Residents Register, and then click on the **Delete** (⊖) button on the Residents tab.

3. An alarm window will pop up with a warning that a resident is to be deleted. Click the **OK** button to completely remove the resident from the system.

Reassign a Pendant Transmitter to Another Resident

When an SF501ES or SF501/2ES Pendant Transmitter is assigned to one resident and must be reassigned to another resident:

1. Click on the **Registers** button, click on the **Residents** tab, and then click on the **Transmitters** tab in the Residents-Details panel.

2. Click on the current resident's name in the list at the left, and note the pendant transmitter's Dev #.

3. Click on the **Transmitters** tab, click on the **Transmitter** tab in the Transmitters-Details panel, and then click on the pendant transmitter's **Dev #** in the list at the left.

4. Click on the **Edit** (📝) button in the Transmitters-Details panel, scroll down to the Resident drop-down box (which shows the current resident's name), select the new resident's name, and click the **Apply** (✅) button.

5. Place a call from the transmitter and verify that the current resident's name appears in the Event Monitor. Cancel the call.

Disable Supervision of a Pendant Transmitter

This feature is available only for pendant transmitters. When supervision is disabled on a transmitter, the Tek-CARE500 will not receive supervisory signals from that transmitter, including missing and low battery statuses. It will continue to receive calls from the transmitter. Disable supervision when a resident leaves the facility with their pendant transmitter so that a "Missing" call will not appear on the LS501 Event Monitor. Shifts can be used to schedule a regularly recurring time period when the resident will be away.

1. First, determine the transmitter's device number. Click on the **Registers** button, click on the **Residents** tab, and then click on the **Transmitters** subtab. In the residents list, click on the **resident's name** and note the associated pendant transmitter's device number.

2. Click on the **Transmitters** tab, click on the pendant transmitter's **device number** in the list on the left side of the Transmitters Register, and then click the **Disable Supervision** subtab. Click on the **Edit** 📝( ) button.

3. Select one of the available shifts during which supervision is to be disabled by checking its box. (Shifts may have been set up by the installer, see *Assignments* on page 83.) Or, select **Always** to disable supervision until it is re-enabled. Click on the **Apply** (✅) button.

    When a transmitter is disabled "Always," when the resident returns repeat the above procedure, unchecking the box next to "Always," to re-enable supervision.

Temporarily Remove a Pendant Transmitter from Use

When an SF501ES or SF501/2ES Pendant Transmitter is lost or broken, remove it from use. When a pendant transmitter is not in use, the Tek-CARE500 will ignore all calls and supervisory signals from that transmitter.

1. Click on the **Registers** button, and then click on the **Transmitters** tab.

2. Place a call using the pendant transmitter. The call will appear as an alarm in the Event Monitor window. Note the transmitter's device number, and click on its **Dev #** in the list at the bottom left of the screen. Cancel the call.

3. Click on the **Edit** ( ) button in the Transmitters-Details panel, uncheck the In use box, and click the **Apply** ( ) button.

NOTE:

When a transmitter's In use box is unchecked, the Tek-CARE500 system will ignore all signals sent by that transmitter.

Delete a Pendant Transmitter from the System

If an SF501ES Pendant Transmitter has been broken, delete it from the Tek-CARE500.

1. First, determine the transmitter's device number. If the transmitter is still assigned to a resident, click on the **Registers** button, click on the **Residents** tab, and then click on the **Transmitters** subtab. In the residents list, click on the resident's name and note the associated pendant transmitter's device number.

2. Click on the **Transmitters** tab, click on the pendant transmitter's **device number** in the list on the left side of the Transmitters Register, and then click the **Delete** ( ) button. on the Transmitters tab.

3. An alarm window will pop up warning that a transmitter will be deleted. Click the **OK** button to completely remove the transmitter from the system.

Send a Text Message

To send text messages (pages).The system must have the following equipment and settings:

- NC365A Paging Transmitter or an NC369 Paging Transmitter and TekTone pagers.

- Paging must be enabled using the LS500 Config Tool (see **Pagers** on page 78).

- Pager CAP codes and Staff information must be added (see **Staff** on page 80).

When equipped with paging equipment and properly customized, the Tek-CARE500 will automatically send a text message to staff pagers in response to a resident call.
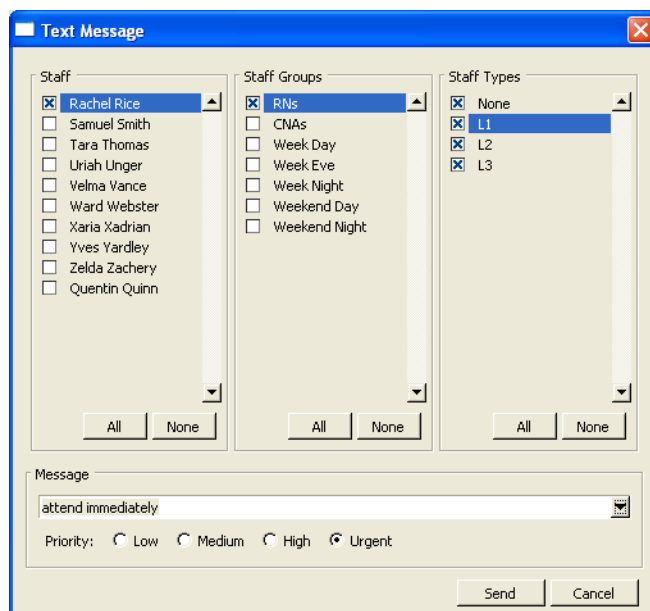
FIGURE 92. Send a Text Message

To send a manual text message to one or more staff pagers:

1. Click on the **Text Message** button.

2. In the window that pops up, select the staff members, staff groups, or staff types to page. Type a custom message in the Message box, or select a preconfigured message from the drop-down box, and select a priority (Low, Medium, High or Urgent. High and urgent override vibrate setting on pager).

3. Click the **Send** button.

Using the Resident Check-In Feature

The resident check-in feature reduces staff labor from manual "up and about" resident checks. A check-in time is a time period during which the system requires a resident to press the room's check-in button or activate its motion detector. (Use SF502ES Wall-Mounted Call Transmitters, SF529ES Wireless Check-In/Assistance Stations, or SF515ES PIR Motion Detectors.) At other times, the system ignores button presses and motion from check-in devices.

If the check-in button is not pressed (or the motion detector is not activated) during the scheduled time period, an Inactivity call appears in the LS501 Event Monitor.

To reset an Inactivity call, at the Tek-CARE500 master station computer, click on the call in the LS501 Event Monitor software and then click the **Acknowledge** button. Pressing the check-in button on an SF502ES transmitter or an SF529ES station will also reset an Inactivity call.

Low Battery Replacement

A transmitter sends a "Battery Low" call to the LS501 Event Monitor when its battery needs to be replaced. To clear the call, select the call line and click on the **Acknowledge** button. Either replace that battery immediately, or run a Low Battery Report weekly and replace all of the low batteries at that time.

The Low Battery Report shows the Transmitter ID (Dev #), Hardware Type, Location and Resident of all transmitters that need their batteries changed. To create the report, click on the Reporting menu at the top of the LS501 Event Monitor and then select Low Battery Report.

After inserting a new battery into a transmitter, the transmitter's battery information in the Transmitters Register will automatically update within its next Supervision Interval.

Missing Transmitters

The system initiates a "Missing" call to the LS501 Event Monitor when it has not received supervisory signals from a transmitter for longer than the Supervision Timeout. This may be due to a dead battery, a broken transmitter, coverage problems, or because a resident has left the facility with their pendant transmitter. The call will clear automatically after the transmitter's In use box is unchecked, or when the system receives a supervisory signal from the transmitter (the dead battery is replaced, or the pendant transmitter is in range).

To replace a dead battery:

After replacing the transmitter's dead battery, press its reset button. Then test the transmitter as described in *Test the Installation* on page 110. The missing call clears from the Event Monitor.

To remove a transmitter from use:

1.   Click on the **Registers** button, and then click on the **Transmitters** tab.

2.   Click on the transmitter's **Dev #,** and then click on the **Edit** ( ) button in the Details panel.

3.   Uncheck the **In use** box, and then click on the **Apply** ( ) button. The missing call clears from the Event Monitor.

> **NOTE:**
>
> When a transmitter's In use box is unchecked, the Tek-CARE500 system will ignore all calls placed from that transmitter.

Tampered Transmitters

The system initiates a "Tamper" call to the LS501 Event Monitor when a transmitter has been tampered with, usually the transmitter's case has been opened. To clear the call, select the call line and click on the Acknowledge button. Or, program the LS501 Event Monitor to ignore all tamper signals from that device.

To ignore all tamper signals from a transmitter:

1.   Click on the **Registers** button, and then click on the **Transmitters** tab.

2.   Click on the transmitter's **Dev #**, and then click on the **Edit** ( ) button in the Details panel.

3.   Check the **Ignore Tamper** box, and then click on the **Apply**   )
button.

Save and Back Up the Current Configuration

After making changes to the database (for example, by adding, moving or removing residents or transmitters), use the LS500 Config Tool software to save a copy of the current custom configuration on the hard drive of the NC501ES Master Station Computer. This copy can be used to reload the current configuration to the Tek-CARE500, if needed.

The LS500 Config Tool software is an offline programming tool used for offline configuration of the Tek-CARE500. It is also used to save and reload custom configurations.

1. If the LS501 Event Monitor is not running, double-click the LS501 Event Monitor icon on the desktop to start the Tek-CARE500 software. When it is connected (shown in the lower-left of the Event Monitor window), continue.

2. Load the current system configuration into the LS500 Config Tool software. This step loads the configuration as it currently exists on the LS501 Event Monitor, including residents, resident location assignments, resident transmitter assignments, and transmitters added using the LS501 Event Monitor software.

    - When the LS500 Config Tool is running, select **File > Load Configuration From System**.

    - When the LS500 Config Tool is not running, double-click the LS500 Config Tool icon on the desktop, and click on **Load Configuration From System**.

3. When the LS500 Config Tool window appears, save and back up the new configuration file:

    Select **File > Save Configuration As** and choose a filename (such as today's date) for the configuration file being created. By default, this file is saved on the NC501ES Master Station Computer's hard drive in the C:\Program Files\TekTone\LS450\Configs\ directory with a file extension of .nc4. If desired, save this file to another location, such as the Desktop.

NOTE:

TekTone strongly recommends backing up the saved configuration file to a CD-R disc or a USB flash drive (not included).

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4. Shut down the LS500 Config Tool Software.

Reload a Previously Saved Configuration

The current system configuration can be completely replaced with an earlier saved configuration. Note that this process completely deletes all current configuration settings. Therefore, before proceeding, save and back up the current configuration as described in the previous section.

The LS500 Config Tool software is an offline programming tool used for offline configuration of the Tek-CARE500. It is also used to save and reload custom configurations.

1.   When the LS501 Event Monitor is not running, double-click the **LS501 Event Monitor** icon on the desktop to start the Tek-CARE500 software. When it is connected (shown in the lower-left of the Event Monitor window), continue.

2.   Load the saved system configuration file into the LS500 Config Tool software.

- When the LS500 Config Tool is running, select **File > Open Configuration**. Browse to the desired configuration file, click on it, and then click **Open**. This reloads the complete saved configuration into the LS500 Config Tool software.

- When the LS500 Config Tool is not running, double-click the **LS500 Config Tool** icon on the desktop, and click on **Open Configuration**. Browse to the desired configuration file, click on it, and then click **Open**. This reloads the complete saved configuration into the LS500 Config Tool software.

3.   When the LS500 Config Tool window appears, upload the configuration to the LS501 Event Monitor.

- Select **File > Consistency Check** to run the consistency check.

- When required, fix any issues, and then select **File > Save Configuration** to save changes.

- Select **File > Commit Configuration to System** to update the Tek-CARE500 LS501 Event Monitor software with the customized programming configuration.

4.   Shut down the LS500 Config Tool Software.

Tek-CARE500 Reporting System

The Tek-CARE500 Reporting System produces standard reports about events that have been cleared from the Event Monitor. These reports provide valuable information to evaluate and optimize staff time. The information contained in these reports also provides accountability information to the facility for each zone, room, type of call and time period.

Low Battery Report

The Low Battery Report shows the Transmitter ID (Dev #), Hardware Type, Location and Resident of transmitters that need their batteries changed. To create the report, click on the Reporting menu on the LS501 Event Monitor software and then select Low Battery Report.

Launch Reporting

To start the Reporting System, select **Reporting > Launch Reporting** from the main menu bar at the top of the LS501 Event Monitor software Main Window.
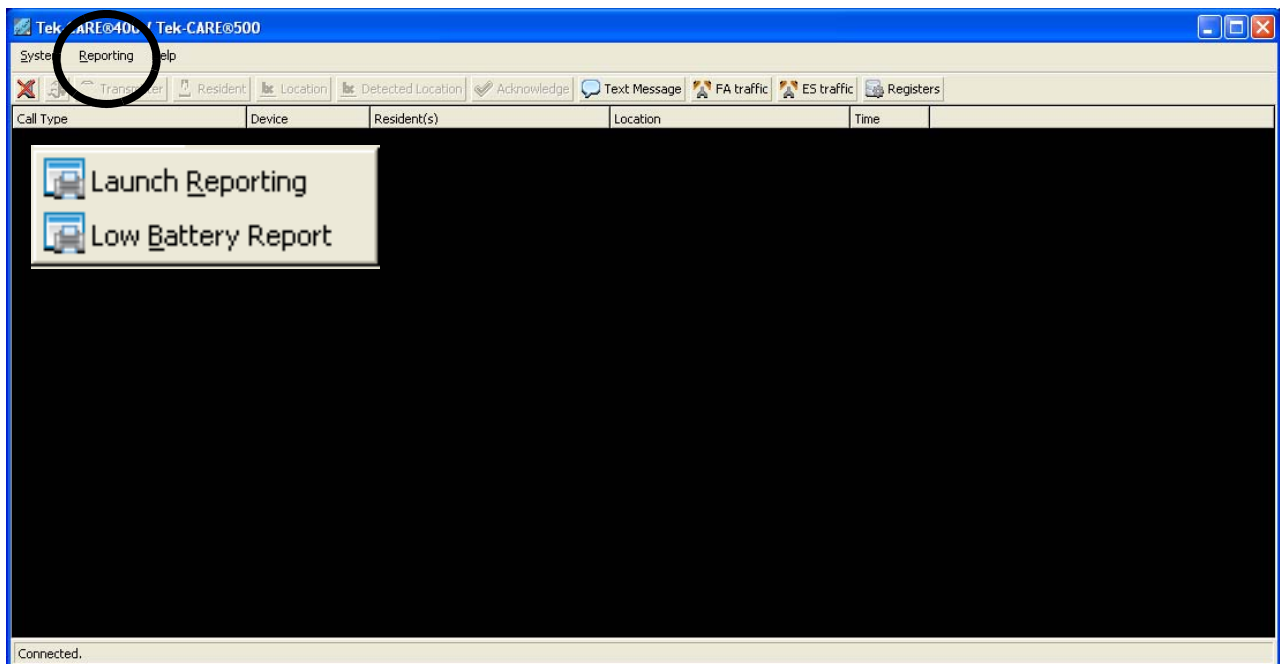

FIGURE 93. LS501 Event Monitor and Reporting Menu

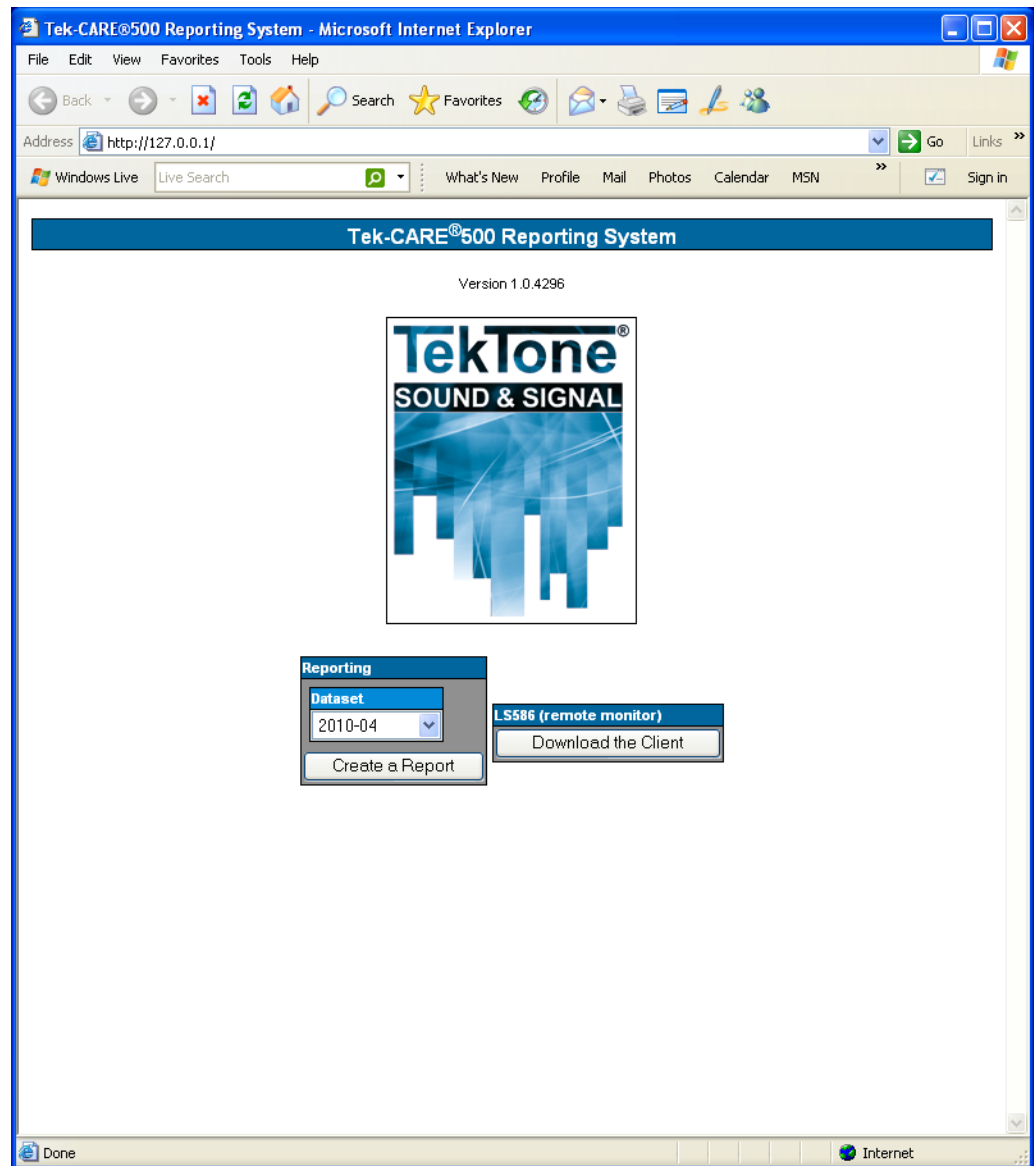The Tek-CARE500 Reporting System main screen will appear.

FIGURE 94. The Tek-CARE500 Report Main Screen

About Datasets

In order to keep report creation times short while the system collects more and more data, calls are stored in datasets that span one month. A second set of datasets is also maintained that includes calls from the middle of one month to the middle of the next. Reports cannot span datasets.

NOTE:

Datasets are located on the NC501ES Master Station Computer and can be accessed across the facility's network.

Creating a Report

To create a report, select a dataset from the drop-down list, and then click the **Create a Report** button.

FIGURE 95. Report Options Screen

Report Options

The Report Options screen is used to define the report's parameters in order to create a custom report. (See Figure 95. **Report Options Screen**, on page 145.)

Select or enter the desired reporting Time Period, Shift, Relevant Calls (Zones, Transmitters, Residents, Event Types), and Response Time.

By default, all calls will be included in the report. To make selections to narrow the report parameters:

1. Uncheck the **All** box before making changes to the selections.

2. Hold down the Ctrl key to make multiple selections or to deselect a single selection from a list.

3. Use 24-hour time.

Next, define the report's appearance:

4. Type a description for the report.

5. Select the type(s) of summary report to create.

6. Select whether to create detailed reports.

After choosing the desired report options, click on the **Create Report** button at the bottom of the screen, and then print the report.

Data Backup

Dataset files have the .db extension and are stored in the C:\Program Files\TekTone\ NC470\Data\ subdirectory on the Tek-CARE500 master station computer.

To back up datasets, copy the .db files to a CD-R disk or a USB flash drive (not included). Do not copy the newest two datasets while Tek-CARE500 is running.

To restore datasets, copy the .db files from the backup media (CD-R or USB flash drive) to the C:\Program Files\TekTone\NC470\Data\ directory on the Tek-CARE500 master station computer.

Using an LS586 Remote Event Monitor

The LS586 Remote Event Monitor software is used to connect additional personal computers (PCs) running Microsoft Windows to the Tek-CARE500 via the facility's LAN (local area network). The software provides real time monitoring of all system activity, creates reports using a web browser, and plays call tones via the PC's speakers (if this option is selected). The LS586 Remote Event Monitor software may be installed on up to nine of the facility's PCs.

To start the LS586 Event Monitor software on a networked computer, click on the LS586 Event Monitor Icon:

> **NOTE:**
>
> The LS586 Remote Event Monitor software is a supplemental system monitoring tool and must not be used as the primary means of annunciation for the Tek-CARE500. To respond to calls, staff must have access to certain features that are available only on the NC501ES Master Station Computer. These features include the ability to clear calls from some transmitter types, to view resident and transmitter information, and to view call locations. Therefore, locate the NC501ES Master Station Computer where primary caregivers have access to it.

The LS586 Remote Event Monitor Screen

This section provides a brief description of the various parts of the screen.


FIGURE 96. LS586 Remote Monitor Screen

- **Menu Bar**
  Menu items are available to set up the software (System menu), to exit the Event Monitor program (System menu), to Launch Reporting (Reporting menu), and to view the software version number (Help menu).

- **Button Bar**
  This area includes buttons used to silence (or unsilence) non-emergency call tones, and to send a text message.

- **Call Display**
  This panel displays a list of currently active calls. The following information is provided for each active call: Call Type, Transmitter device number, Resident name, Location, and Time elapsed since the call was initiated.

Menus

Menu selections found on the LS586 Remote Event Monitor Screen are:

- **System Menu**:
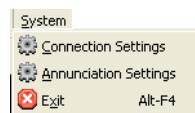
  - **Connection Settings**
    Used to configure the software. See ***Add an LS586 Remote Event Monitor*** on page 114.

  - **Annunciation Settings**
    Used to determine which calls are shown on the LS586 Remote Event Monitor's call display, and whether they are audible. See ***Select Call Types to Display*** on page 150.

  - **Exit (Alt+F4)**
    Closes all interfaces and terminates the LS586 Remote Event Monitor software application. No information will be displayed when the software is not running. (The Alt+F4 combination performs the same function.)

- **Reporting Menu**:

  - **Launch Reporting**
    Starts the Tek-CARE500 Reporting System. See ***Tek-CARE500 Reporting System*** on page 142.

- **Help Menu**:

  - **About Tek-CARE500**
    Displays the software version number.

Buttons

Buttons found on the LS586 Remote Monitor Screen are:

- **Silence**

  Click (while a call is active) to turn alarm tones off. Emergency alarm tones cannot be silenced.

- **Unsilence**

  Click (while a call is active) to turn alarm tones on.

- **Text Message**

- Click on this button to send a custom text message to one or more staff members, staff groups, or staff types.

Select Call Types to Display

Each LS586 Remote Event Monitor is separately configured to display all calls, or to display only certain call types. (The default is to display all calls.) Each Remote Event Monitor is also separately configured to play sounds when calls are received.

To select which calls the LS586 Remote Event Monitor shows:

1.   Select **System Menu > Annunciation Settings** to access the Annunciation Settings window, as shown in Figure 97.
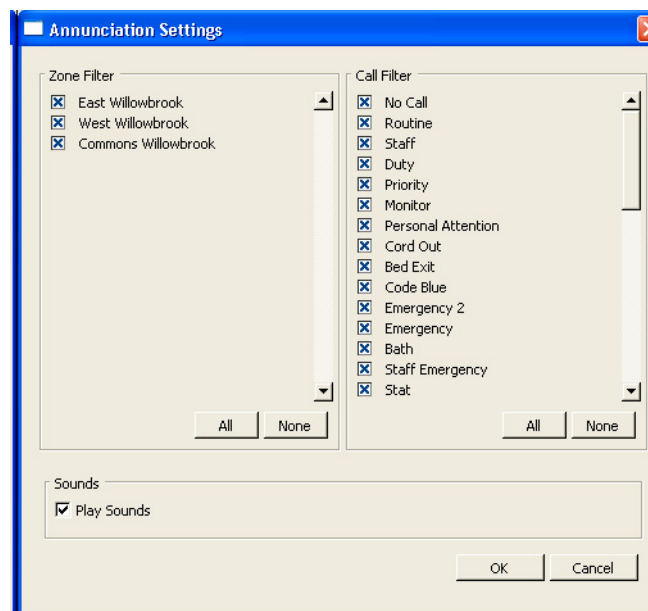

FIGURE 97. Annunciation Settings

2.   To limit which zones' calls are displayed, click the **None** button in the Zones panel to uncheck all zones. Then check each individual zone that you want displayed on this Remote Event Monitor.

3.   To limit which call types are displayed, click the **None** button in the Call Filter panel to uncheck all call types. Then check each individual call type that you want displayed on this Remote Event Monitor.

4.   To prevent a sound from playing when a call is displayed, uncheck the **Play Sounds** box in the Sounds panel. (The default is to play a sound over the PC's speakers whenever a call is displayed.)

5.   Click the **OK** button to save the new annunciation settings.

Clear a Monitor Fault

A monitor fault occurs at the NC501ES Master Station Computer when a Remote Event Monitor PC closes its copy of the LS586 Remote Event Monitor software. Monitor faults can only be cleared at the master station computer.

To clear a monitor fault, select **System > Redetect** from the LS501 Event Monitor's menu bar.

LS586 Event Monitor Reporting System

The LS586 Event Monitor's Reporting System operates in the same manner as the LS501 Event Monitor's Reporting system. Refer to ***Tek-CARE500 Reporting System*** on page 142 for instructions.

Text Message

The system must have an NC365A Paging Transmitter or an NC369 Paging Transmitter and TekTone pagers to send text messages (pages). Paging must also be enabled using the LS500 Config Tool (see ***Pagers*** on page 78), and pager CAP codes and staff must be added (see ***Staff*** on page 80). When equipped with paging equipment and properly customized, the Tek-CARE500 will automatically send a text message to staff pagers in response to a resident call.

To send a manual text message to one or more staff pagers:

1. Click on the **Text Message** button.

2. In the window that pops up, select the staff member(s), staff groups, or staff types to page. Type a custom message in the Message box, or select a preconfigured message from the drop-down box, and select a priority (Low, Medium, High or Urgent. High and urgent override vibrate setting on pager).

3. Click the **Send** button.